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EDITORIAL:-

DIABETES AND HYPERTENSION: ISSUES OF TREATMENT COMPLIANCE.

Over the past few years the number of patient diagnosed with hypertension or diabetes mellitus gets on increasing. However majority of these people either do not start their treatment or continue as advised by their doctor. The reason why most people did not want to take medicines is because of their belief that once started they have to continue it until their death. Another group of patients who may not like to take medicines is because of their financial difficulties. How should we solve this problem to enhance their compliance to the treatment offered?

We would need a multidisciplinary approach where every medical personal, who encounter these patients, encourage them to take medicines by explaining the various possible complications of diabetes and Hypertension and also by educating them to control their BP and blood sugar. Some degree of fear created in the patients if they remain without medications would be an intrinsic force that would make them to start and remain adherent to medications.

Public awareness program should also be organized through media. Such programs should focus on motivating patients to seek health maintenance examination and also adopting healthy life style. We should also include pharmacist in this process because there are a group of patients who try to find out the reason why medicines have been instituted to them by physicians. They would also ask to find out the appropriateness of the treatment plan.

These are the very simple tasks that we recommend every physician to follow, so that any untoward events may not likely to happen in future. The basic principle is: once your patient complies with your treatment plan, he or she will definitely get benefit and thanks you.

Fibrinogen: Risk Factor for Cardiovascular Disease

Kafle, Dilli Ram

Abstract:

Patients with diabetes mellitus have 2 to 4 times increased risk for cardiovascular disease than non-diabetic patients. However this excess risk is not fully explained by the traditional cardiovascular risk factors (Hypertension, Hypercholesterolaemia, Smoking and Obesity) which are also associated with diabetes. Fibrinogen has been identified as an independent risk factor for cardiovascular disease and it is associated with traditional cardiovascular risk factors. Studies done in the Caucasians have shown fibrinogen to be higher in diabetic than the non-diabetic patients. Elevated fibrinogen in diabetic patients may be responsible for the increased cardiovascular risk in those patients. Elevated fibrinogen is also associated with increased mortality in general population.

Key word: Fibrinogen , cardiovascular disease

Introduction:

Plasma fibrinogen is an important component of the coagulation cascade, as well as a major determinant of blood viscosity and blood flow. Increasing evidence from epidemiological studies suggests that elevated plasma fibrinogen levels are associated with an increased risk of cardiovascular disorders, including ischaemic heart disease (IHD), stroke and other thromboembolism.[1,2]

Pathophysioloy:

Fibrinogen is a soluble glycoprotein found in the plasma, with a molecular weight of 340 kDa.[3] It comprises of three pairs of non-identical poly peptide chains (alpha, beta and gamma chains)[4] linked to each other by disulphide bonds. Fibrinogen has a biological half-life of about 100 h and is synthesized predominantly in the liver.[5] As a clotting factor, fibrinogen is an essential component of the blood coagulation system, being the precursor of fibrin. However, at the 'usual' plasma levels of 1.5 to 4.5 g/l, its concentration far exceeds the minimum concentration of 0.5–1 g/l necessary for haemostasis. Fibrinogen plays a vital role in a number of physiopathological processes in the body, including inflammation, atherogenesis and thrombogenesis. Nevertheless, our understanding of the mechanisms leading to the atherothrombogenic action of fibrinogen is fragmentary. Proposed mechanisms include the infiltration of the vessel wall by fibrinogen, increase in blood viscosity, increased platelet aggregation and thrombus formation. Furthermore; plasma fibrinogen is also a prominent acute-phase reactant. It augments the degranulation of platelets in response to adenosine diphosphate (ADP), when taken up by the granules. Thus, elevated concentrations of fibrinogen, perhaps secondary to inflammation or infection (Chlamydia pneumoniae or Helicobacter pylori) implicated in cardiovascular risk may

operate, in part, by increasing the reactivity of platelets.[6]

Fibrinogen and inflammation:

The process of inflammation is primarily mediated by its interaction with leucocytes through the surface receptors of the latter termed 'integrins. The 2 main receptors for fibrinogen on the surface of leukocytes include Mac-1 (CD11b/CD beta 2) and alpha X beta 2 (CD11c/CD18,). Leukocytes (both monocytes and myelocytes) can specifically induce MAC–1 receptor to bind fibrinogen.[7,8] The ability of MAC–1 receptor to bind fibrinogen results from the maturational changes occurring in the receptor during the process of cell differentiation, and is not seen in a resting leukocyte. The site on fibrinogen that interacts with MAC-1 is not shared by other integrins.[9]

Fibrinogen is also a ligand for Intercellular Adhesion Molecule-1 (ICAM-1), and enhances monocyte-endothelial cell interaction by bridging the Mac-1 on monocytes to ICAM-1 on endothelial cells.[10,11] Thus ICAM-1 behaves as a cell surface ligand for alpha beta 2 and alpha M beta 2 (MAC-1) integrins, and has a key role in leukocyte adhesion to the vascular endothelium. Furthermore ,fibrinogen up regulates and increases the concentration of ICAM-1 proteins on the surface of endothelial cells, resulting in increased adhesion of leukocytes on the surface of endothelial cells[12], even at high shear rates in flow conditions.[13] Moreover, the fibrinogen binding to ICAM-1 on the endothelial cells also mediates the adhesion of platelets. The interaction of fibrinogen and cells expressing ICAM-1 is associated with cellular proliferation.[14]

Fibrinogen, on binding to its integrin receptor on the surface of leukocytes also facilitates a chemotactic response, thus playing a vital role in the process of inflammation.[15] One of the proposed mechanisms by which fibrinogen induces proinflammatory changes in leukocytes includes an increase in the free intracellular calcium and increased expression of neutrophil activation markers These processes result in an increase in phagocytosis, antibody-mediated leucocyte toxicity and delay in apoptosis.[16]

Fibrinogen is also involved in the facilitation of both cell–cell interaction and the interaction of cell and extracellular matrix such as collagen.[7,17] Thus, as explained above, fibrinogen is an important mediator of cell–cell interaction, adhesion and inflammation.

Finally, there is evidence that fibrinogen facilitates the biomaterial-provoked inflammatory response.[18] Interaction with the biomaterial results in conformational changes within the fibrinogen molecule and conversion into 'proinflammatory' fibrinogen, resulting in the exposure of the epitope that interacts with the MAC-1 receptor for macrophages.[18,19]

Fibrinogen and atherogenesis:

There seems to be little doubt that fibrin deposition can both initiate atherogenesis and contribute to the growth of plaques.[46,47] Fibrinogen and its metabolites appear to cause endothelial damage and dysfunction by a number of mechanisms.[48] Many human atherosclerotic lesions, showing no evidence of fissure or ulceration, can contain a large amount of fibrin, which may either be in the form of mural thrombus on the intact surface of the plaque, in layers within the fibrous cap, in the lipid-rich core, or diffusely distributed throughout the plaque. This phenomenon

may be compounded by the decrease in arterial intimal fibrinolytic activity and plasminogen concentration observed in cardiovascular disease.[20]
It has been proposed that once in the arterial intima, fibrin stimulates cell proliferation by providing a scaffold along which cells migrate, and by binding fibronectin, which stimulates cell migration and adhesion. Fibrin degradation products, which ` bv`are present in the intima, may stimulate mitogenesis and collagen synthesis, attract leukocytes, and alter endothelial permeability and vascular tone. In the advanced plaque, fibrin itself may be involved in the tight binding of LDL and accumulation of lipid, resulting in the lipid core of atherosclerotic lesions.[20]

Epidemiological studies:

Several epidemiological studies have provided prospective data on plasma fibrinogen levels in relation to cardiovascular disease.According to these the risk of developing a cardiovascular event such as IHD or stroke is 1.8 to 4.1 times higher in subjects with fibrinogen levels in the top third than in those with levels in the lower third. Preliminary evidence also suggests that reducing fibrinogen levels in patients with high baseline levels and coronary disease may be beneficial.

A meta-analysis of the six prospective epidemiological studies with samples representative of the general population, concluded that plasma fibrinogen was an independent cardiovascular risk factor, the results being uniform despite the diversity of study designs, sample compositions, follow-ups and end-point criteria. In this meta-analysis of 92 147 person-years experience, all prospective studies showed that plasma fibrinogen was associated with subsequent myocardial infarction (MI) or stroke. The odds ratio for the events in the upper vs. lower tertile varied between 1.8 (95% CI 1.2–2.5) in the Framingham study and 4.1 (95% CI 2.3–6.9) in the Gottingen risk incidence and prevalence study, with a summary odds ratio of2.3 (95% CI 1.9–2.8). Furthermore, there was uniform, continuous increase in risk from the lowest to highest tertile. Plasma fibrinogen was associated with 'true' risk factors such as diabetes, hypertension and hypercholesterolemia in the studies included in this meta-analysis. However, even when these factors were included in the multivariate analysis, the association between plasma fibrinogen and cardiovascular disease remained statistically significant, suggesting that fibrinogen is an independent cardiovascular risk factor.

In another meta-analysis[53], which included 22 studies (13 prospective, 5 cross-sectional, and 4 case-control) trying to determine the role of fibrinogen as a cardiovascular risk factor, the overall estimate of risk of cardiovascular events in subjects with plasma fibrinogen levels in the higher tertile, was twice as high as that of subjects in the lower tertile (OR 1.99; 95% CI 1.85–2.13). High plasma fibrinogen levels were associated with an increased risk of cardiovascular disease in healthy as much as in high-risk individuals. Thus, there is strong and unequivocal evidence from epidemiological studies that plasma fibrinogen levels are independently related to the presence of, and the subsequent development of, vascular disease. Principal findings from some of the pivotal epidemiological studies are summarized below.

The Northwick Park Heart Study (NPHS):

In this study, out of 1511 White men aged between 40 and 64 years, 109 subsequently experienced a first major IHD event.

Elevated levels of plasma factor VII coagulant activity and fibrinogen were

associated with increased IHD risk. Indeed, elevations of one standard deviation in factor VII activity, fibrinogen, and cholesterol were associated with increases in the risk of an episode of IHD within 5 years of 62%, 84%, and 43%, respectively, demonstrating that the association between haemostatic markers and IHD to be stronger than that for cholesterol.

Gothenburg study:

In a random sample of 792 men aged 54 years, MI occurred in 92 men, stroke in 37, and death from causes other than MI or stroke in 60 during 13.5 years of follow-up. Plasma fibrinogen was an independent risk factor for MI and stroke on univariate analysis.

Leigh General Practice Study:

In the Leigh General Practice Study,[22] 505 men aged 40–69 years and free from IHD, diabetes and hypertension were recruited from one general practice in the UK. After a mean follow-up of 7.3 years, 40 cases of MI occurred. On multivariate analysis, plasma fibrinogen proved to be the strongest predictor of adverse cardiovascular events, with an OR of 21:1 when those with high levels (> 3.5 g/l) were compared to those with low levels (< 2.9 g/l) of fibrinogen.

Framingham Study:

In the Framingham Study,[23] the risk of developing cardiovascular disease was significantly related to plasma fibrinogen levels. In both sexes, cardiovascular and stroke risk increased progressively in relation to antecedent fibrinogen values over the 1.8–4.5 g/l range. As in NPHS, the influence of plasma fibrinogen on cardiovascular risk was much more pronounced in younger men. The impact of plasma fibrinogen levels on cardiovascular disease was comparable with the major risk factors, such as blood pressure, haematocrit, adiposity, cigarette smoking and diabetes; and was still an independent predictor of coronary artery disease on multivariate analysis.

Munster Heart Study:

In the Munster Heart Study (Prospective Cardiovascular Munster Study, PROCAM),[24] plasma fibrinogen, factor VIIc, blood pressure, and lipid parameters were measured in 2781 healthy men aged 40–65 years. After 8 years of follow-up, 130 coronary events were observed, and the mean plasma fibrinogen level of the 'event group' exceeded that of the non-event group by 0.32 g/l. The incidence of coronary events among men within the upper tertile of plasma fibrinogen Concentration was threefold higher than among men within the lower tertile. When fibrinogen and LDL concentration were considered together, there was a graded and dramatic eightfold increase in 8-year risk among men with both fibrinogen and LDL cholesterol in the higher tertiles, when compared to men with both of these parameters in the lower tertile

Caerphilly and Speedwell studies

The Caerphilly and Speedwell collaborative heart disease studies [25] were based on a combined cohort of 4860 middle-aged men from the general population. After a follow-up of 5.1 years in the Caerphilly study and 3.2 years in the Speedwell study, 251 major IHD events occurred. The age-adjusted relative odds of IHD for men in the top 20% of the distribution compared with the bottom 20% were 4.1 for fibrinogen 4.5 for viscosity, and 3.2 for white blood cell

count. Multivariate analysis showed that white blood cell count, fibrinogen and viscosity were independent risk factors for IHD.

European Concerted Action on Thrombosis and disabilities study (ECAT)

In the ECAT,[4] plasma fibrinogen was a strong and independent risk factor for MI and sudden death, particularly in patients with pre-existing coronary artery disease, along with plasma von Willebrand factor (vWF) antigen (a marker of endothelial amage), and tissue plasminogen activator antigen (a marker of thrombolytic activity). In patients with Coronary artery disease, the relationship of plasma fibrinogen levels to the incidence of acute coronary syndromes was stronger than that of low density lipoprotein cholesterol. Fibrinogen (RR 1.31, 95% CI 1.07–1.61) had a stronger association with future coronary events than either vWF antigen (RR 1.24, 95% CI 1.00–1.53) or t-PA antigen (RR 1.29, 95% CI 1.04–1.60.

Table: 1.
Factors influencing plasma fibrinogen levels

Factors associated with Raised fibrinogen	Factors associated with lower fibrinogen
Advancing age	Young age
Female sex	Male sex
Black race	Caucasians
Smoking	Cessation of smoking
Obesity	Weight reduction
Physical inactivity	Regular exercise
Elevated cholesterol	Moderate alcohol consumption
Menopause	Hormone replacement therapy
Oral contraception	
Low socio-economic status	
Stress	

Table-2.

Interventions to decrease plasma fibrinogen levels

Beneficial	-	Cessation of smoking
	-	Medication: fibrates, doxazosin
	-	Plasmapheresis
	-	Moderate alcohol consumption
May be beneficial	-	Weight loss
	-	Lowering blood pressure
	-	Hormone replacement therapy
Not Beneficial	-	Statins

Conclusion:

Patients with diabetes have increased risk for the development of coronary artery disease. Fibrinogen is found in higher level in patients with diabetes than those patients without diabetes. Fibrinogen is found in higher level in diabetic patients with coronary artery disease than those patients who have only diabetes or only coronary artery disease. Fibrinogen is significantly associated with glycosylated hemoglobin in these patients.

Fibrinogen is also significantly associated with major conventional cardiovascular risk factors like smoking, hypertension, body mass index, hypercholesterolemia, physical inactivity and aging. Thus increased fibrinogen may be one mechanism by which these factors increase risk for coronary artery disease.

Fibrinogen is an important risk factor for the development of cardiovascular disease. Fibrinogen is partly a modifiable risk factor, and changes in life style and glycaemic control in diabetic patients usually result in favorable decrease in plasma fibrinogen level. Thus by lowering the fibrinogen level the risk for cardiovascular disease can be decreased.

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ANGER AND IT'S MANAGEMENT

Mahat Pashupati and Sharma Vidya Dev

Abstract

Anger as an emotional reaction involves both physical and psychological changes in our health. Despite of common emotional reactions, it can create many physical and psychological disturbances and diseases as well. So, information regarding its management is helpful to learn some of the simple skills to control it. There cannot be a single cause of the anger. Heredity factors, home environment, social learning and cultural factors are important factors for its emergence. Behavioral techniques and cognitive restructuring techniques are found to be effective methods in controlling anger reaction if practiced properly and systematically. They are effective only if practicing therapist or psychologist is equipped with these skills. It cannot be done jus reading an article in the books.

Key Words: Anger, Emotion, Management

Introduction

Anger is an undesirable state of affairs in that anger and behaviors associated with it constitutes a problem for individuals and society as a whole. According to Charles Spielberger anger is an "emotional state that varies in intensity from mild irritation to intense fury and rage" (Spielberger, 1983). It is often consider as a common experience in everyday life (Averill, 1982).

Everybody get angry at any point of his or her life. Often it gives favorable result in fulfilling the demand of the individual. However, anger itself is not desirable and good for both physical and emotional health.

Anger is a completely normal, usually healthy, human emotion. But when it gets out of control and turns destructive, it can lead to problems in different areas of life such as problems at work, in the personal relationships, and in the overall quality of our life. Anger may lead also to serious violent offences. However violence can occur in an instrumental fashion without affective arousal. Anger is considered by many as a contributing factor to the general phenomena of aggression and violence (Averill, 1982; Levey & Howells, 1990).

Nature of anger reaction

It is always accompanied by both biological and psychological changes.

Biological changes includes increase heart beat, increased respiration rate, raised blood pressure, increase the energy level due to increased blood flow in the muscles, hormonal activities (adrenaline and nor-adrenaline), increased muscles tension or contraction (skeletal muscles) and increased body temperature. So it affects in all the vital systems of human being. Similarly, there various psychological changes occur during anger reaction. Some of these changes are loss of concentration, decreased ability of tolerance, patience, increased restlessness or pacing movement, heightened tension feeling and impairment in the decision-making ability. If anger reaction persists longer time, it can lead to changes in various physiological functioning and psychological activities of our health.

Why are some people more angry than the others? Deffenbacher (1999) states that some people really are "hotheaded" than the others. Some people do not express anger overtly. Some people have low tolerance to anger and frustration. One cause for anger reaction may be genetic or physiological: there is evidences that some children are born irritable, touchy, and easily angered from a very early age. Another may be socio-cultural: not getting opportunity to learn to handle anger reaction constructively.

Research has shown that family background plays a role. Typically, people who are easily angered come from families that are disruptive, chaotic, and not skilled at emotional expression.

Assessment and formulation of anger problems

Anger management must be guided by the current research findings. Literature revealed that the detail assessment of the anger behavior is the first step to develop intervention strategies. Functional analysis of anger is the basic step for anger assessment (Blackborn, R., 1993; Kirk, J. 1989). Various variables need to be considered in the functional analysis of anger. Some of them are listed below:

- Frequency, intensity, duration and form of anger or aggression
- Environmental triggers (including back ground stressors)
- Cognitive antecedents (including biases in appraisal of events, dysfunctional schema, underlying beliefs and values supporting aggression)
- Affective antecedents (emotions preceding aggressive acts, e.g. anger or fear)
- Physiological antecedents (different sensation)
- Coping style and problem-solving skills
- Personality dispositions (e.g. anger-proneness, impulsivity, psychopathy, general criminality, over control, under control) (Anderson and et. al, 1996).
- Mental disorder variables (mood, brain impairment, delusions, hallucinations, personality problems)
- Consequences / functions of aggressive acts (including emotional consequences such as remorse)
- Buffer factors (good relationship, family support, achievement in some area)
- Opportunity factors (weapons, victim availability, restrictions) that affects the degree of anger reaction.
- Disinhibitors (alcohol, drugs)

Management

The goal of anger management is to reduce both emotional feelings and the physiological arousal that anger causes. A comprehensive management package is essential to deal with the anger and aggression problems. Some of the basic intervention are listed but selection is depended upon the functional analysis of the presenting anger / aggression problem.

Behavioral Strategies to control Anger

Relaxation

Simple relaxation tools, such as *deep breathing* and *relaxing imagery* can help in calm down angry feelings. Some simple steps one can try: Breathe deeply, from your diaphragm; breathing from your chest won't relax you. Slowly repeat a calm word or phrase such as "relax", "take it easy". Repeat it while breathing deeply. Use imagery; visualize a relaxing experience, from either your memory or your imagination. Nonsternuous, slow yoga-like exercises can relax your muscles and make you feel much calmer. Practice of these techniques daily is

necessary to learn use them automatically when one is in a tense situation.

Use of self-statement to control anger

Remind yourself that getting angry is not going to fix anything, that it won't make you feel better. Angry people need to become aware of their demanding nature and translate their expectation into desires. "I would like" something is healthier than saying "I demand" or "I must have" something.

Problem Solving

Skills to solve the various type of problems is necessary because often it becomes the sources of frustration and causing anger.

Better Communication

Communication skills are one of the key factors provoking anger to others (Wyer, et al. 1993). When there is a heated discussion: slow down and think through your responses. Don't say the first thing that comes into your head, but slow down and think carefully about what you want to say. Listen carefully to what the other person is saying and take your time before answering.

Using Humor

It is the opposite activity of anger. Using certain statement that has potential of creating humor in one's emotional life is found very effective in reducing anger.

Changing the environment

This is all about modifying the anger provoking situation such by giving break to one self, arranging for personal time during the stressful situations, keeping silent for few minutes, or making some rules to prevent anger provoking situations and control one self for better ways of coping with the existing problems.

Cognitive intervention

This means changing the way you think: angry people tend to curse, swear or speak in highly colorful terms that reflect their inner thoughts (Teasdale, J.D., 1997). When we are angry, our thinking can get very exaggerated and overly dramatic. Try replacing these thoughts with more rational ones. For instance, instead of telling ourselves, "oh, it's awful, it's terrible, every thing's ruined," tell ourselves, "it's frustrating, and it's understandable that I'm upset about it, but it's not the end of the world and getting angry is not going to fix it anyhow. Use words carefully while communicating with others such as "never" or "always". There are systematic strategies for such restructuring.

Improving client's understanding of the nature and components of the problem

A collaboratory approach between the client and therapist is essential. Novaco's (1978, 1993, 1994 &1997) model (such as anger as a product of environmental event, cognitive processes, physiological arousal, and behavioral reactions) could be used explicitly by and with the client. This strategy involves analysing previous episodes of anger, aggression and violence.

Identifying and modifying the immediate triggering events

Focus on the modification of the triggering factors instead of clients' response to it (Berkowitz, L., 1990, 1993a). Stimulus control and avoidance of triggering factor are also useful here.

Identifying and modifying contextual stressors

Client needs to learn the effect of previous stressors on how they deal with particular provocation. Reduction of the provocative factor (family problems, unemployment, and

poor living conditions) is the therapeutic goal (Berkowitz, L. (1993b).

Changing cognitive inferences and dysfunctional schemata

Many inferences in the inference chains need to disconfirm and change (Chemtob, et. al. 1997a). Such as eye contact does not necessarily mean being stared at which is found often anger provocative factors for female. It is an intensive and depth work where therapist should skillful in exploring these inferences in cognitive level.

Undermining dysfunctional interferences and schemata by tracing their developmental roots

Inferences that 'this person is ridiculing me in front of others' has its roots in early experiences of this sort in a family or school environment. It requires more session works rather than single. Because, working with the earlier life experiences and home or school environment needs good relationship between client and the therapist.

Improving control of physiological arousal

Where arousal is an important part of the anger or violence problem then relaxation and similar techniques have better role to reduce it. These techniques help in reducing the arousal to pre-provocative state of anger. Earlier detection of the signs and symptoms of such arousal through various sense organs is helpful in mediating anger behaviour to control (Forgas, J.P. (1993).

Broadening the repertoire of coping responses

Problem solving, social skills training, and related techniques can be used to generate new ways of coping with potential provocations.

Problem solving skills, standard social skill methods of role-play, feedback, rehearsal and homework assignments have a role.

Prevention of escalating social behaviour

Minor triggering factors can lead to violence (such as minor dispute, disagreement). So identifying escalating factors early and controls them through the use of various behavioral techniques (avoidance of such situation)

Strengthening commitment to change

Generating motivation in controlling anger or modifying response to provocative situations, provide understanding about the role of negative behaviour (drinking alcohol) used in anger.

Edmondson and Conger (1996) in their meta-analytic review found effectiveness of these interventions with the people having trait anger.

Conclusion

Anger as an emotional reaction involves both physical and psychological changes in our health. Despite of common emotional reactions, it can create many physical and psychological disturbances and diseases as well. So, information regarding its management is helpful to learn some of the simple skills to control it. There cannot be a single cause of the anger. Heredity factors, home environment, social learning and cultural factors are important factors for its emergence. Behavioral techniques and cognitive restructuring techniques are found to be effective methods in controlling anger reaction if practiced properly and systematically. They are effective only if practicing therapist or psychologist is equipped with these skills. It cannot be done jus reading an article in the books.

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1PREVALENCE OF ANXIETY SYMPTOMS AMONG THE CLIENTS MAINTAINED IN METHADONE MAINTENANCE TREATMENT PROGRAMME AT TRIBHUVAN UNIVERSITY TEACHING HOSPITAL

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Abstract:

Background: The symptoms of anxiety are widely prevalent among the former opioid addicts in methadone maintenance treatment (MMT). It is clinically important to be aware of the severity of the co-morbidity as it plays a crucial role in the methadone dosage, length of time in treatment and the relapse rate and the co-existence of co-morbidity has been described as the factor which worsens the prognosis.

Aim: to study the prevalence of the symptoms of anxiety among MMT clients

Methods: a descriptive, survey and a cross- sectional study, 60 MMT clients were selected who had been attending the MMTP for more than 2 months and were given with semi-structured proforma specifically designed for this study only. Then after, they were evaluated for the anxiety symptoms with Beck Anxiety Inventory (BAI). Finally, the information obtained from the demographic profile and the rating scale were analyzed with the help of computer program SPSS.

Results: The study showed around 41.7 % of the patients had symptoms of anxiety with varying severity. Correlates of presence of anxiety symptom among MMT client in the present study showed higher prevalence among age group 20-29(88%), 66% were separated and 64% were unmarried, 50% were Buddhist, majority of the case were chhetri (70%), 75% had primary level education, 67% were unemployed, and 65% from middle class socio-economic status.

Limitation: The study was a cross sectional, which showed only the symptoms of anxiety not the disorder and the drug use, withdrawals itself, could distort evaluation and lead to misdiagnosis of anxiety.

Conclusion: The major risk factor for was male gender, separated, primary education level, students and middle socio-economic status.

Key words: Anxiety, Beck Anxiety Inventory, Methadone.

Introduction:

Substance use disorders co-vary with other psychiatry disorders. Comorbidity is prevalent for substance use and dependence and for anxiety, affective, antisocial and other personality disorder[1,2,3,4]. Some psychiatric disorders preceded the onset of drug dependence while others are precipitated by the chronic drug use[8,10]. In a study specifically restricted to methadone

maintenance treatment, found a strong association between opioids user and psychopathology[7,9,10]. In a study conducted by Ronald et al, in 1994, nearly 50% of respondents reported at least one lifetime disorder, and close to 30% reported at least one 12 month disorder[6]. The most common disorders were major depressive episode, alcohol dependence, social phobia, and simple phobia substance abuse patients have higher rates of health problem and involvement with the criminal activity. A study conducted by Drake, Swift, and Hall et al. in 1994, a sample of 222 MMT clients was tested for the levels of depression, anxiety and antisocial personality disorder, the subject (51.4%) showed to have anxiety as showed from the score of STAI[1].

The higher prevalence of psychopathology among opioid user is relevance to treatment provider for several reasons as clients with co-morbidity respond poorly to treatment and the psychopathology has been associated with higher levels of HIV infections. Milby, Mclellan et al.1999, found the prevalence rates for anxiety and affective disorders in three follow-up samples of opioids addicts treated with methadone maintenance: at least one anxiety disorder was diagnosed in 55% of the total sample[5]. At least one anxiety disorder coexisted with at least one affective disorder in 36% of the sample There are several studies in the world literature that addresses the issues of the prevalence of depression among MMTP clients but till date no studies has been conducted in Nepal focusing on the co-existence of anxiety symptoms among MMTP clients. Thus the study has been carried out to see the prevalence of anxiety symptoms among MMTP clients.

Method and methodology:

Sample

The study was survey, descriptive and cross-sectional. It consisted of total sample of 60 clients attending MMTP for more than two months. (The Clients were selected with inclusion and exclusion criteria)

Inclusion criteria:

1. Clients on regular MMT at least for two months.
2. Clients who gave the consents for participating in the study.
3. Clients able to read and write.

Exclusion Criteria:

1. Clients not willing to participate in the study.
2. Clients using other psychoactive substance besides methadone.
3. Clients with other medical and surgical illness.

Every case was explained with the purpose of the study and the verbal consent was taken. They were given first with the semi structured proforma, specifically designed for this study, which composed of socio-demographic profile: later the clients were given Beck Anxiety Inventory (BAI), which gave the subjective results. The collected data was analyzed using suitable statistical tools.

Results:

In the current study, 41.7% of the patients had symptoms of anxiety with severity. Correlates of presence of anxiety symptom among methadone maintenance treatment clients in the present study showed the prevalence of anxiety symptoms highest among age group 20-29 years (88%) separated (66%) and unmarried patients (66%), Buddhist religion (50%), chhetri caste (70 %), patients with primary level of education (75%), Unemployment (67%), and middle class socio-economic status (65%).

Table: 1. Distribution of Respondents According to Presence of Anxiety after weighted Scoring from Beck Anxiety Inventory (BAI)

Anxiety	Frequency	Percent
Yes	25	41.7
No	35	58.3
Total	60	100

Table show the distribution according to presence of anxiety, (Presence of anxiety means more than 21 in BAI). 41.7% of sample indicated the presence of anxiety.

Table: 2. Distribution of Respondents According to Different Levels of Weighted Score on Beck Anxiety Inventory (BAI)

Beck Anxiety Inventory(BAI)	Frequency	Percent
No Anxiety(<21)	18	30
Mild Anxiety(21-32)	34	56.7
Moderate Anxiety(33-48)	8	13.3
Total	60	100

Table: 3. Distribution of Respondents According to Socio-demographic Profile

Demographic Profile		Anxiety	
		Frequency	Percentage
Age Group	20-29	16	88
	30-39	2	12
	>40	6	50
Religion	Hindu		57
	Buddhist	7	36
	Christian	2	50
Marital Status	Single	18	64
	Married	5	35
	Separated	12	66
Caste	Brahimin	3	50
	Chettri	7	70
	Newar	19	55
	Mongolin	6	60
Education	Primary	3	75
	Secondary	10	43
	Intermediate	8	61
	Higher	14	70
Occupation	Unemployed	26	66.7
	Student	1	33
	Business	2	20
	Service	2	25
Socioeconomic Status	Lower	2	50
	Middle	32	65
	Upper	2	50

Discussion and Summary:

Methadone Maintenance Treatment Program in recent years has been promoted in many countries as a substitution therapy for opiate dependence and also with the perspective of reducing HIV transmission among drug user especially injecting drug user.

Psychiatric co-morbidity was associated with a more severe pattern of substance abuse and greater psychosocial problem. It has been found that the psychopathology to be an important predictor of addiction treatment success, with negative relation between severity of the psychiatric problem

and the treatment success. In this study, the anxiety symptoms were higher among age 20-29-age group, separated, among students & with primary level of education and from middle socio- economic status also scored high in the BAI.

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EFFECT OF ETHANOL EXTRACT OF LEAF OF CAJANUS INDICUS SPRENG IN CARBON TETRACHLORIDE INDUCED HEPATOPATHY IN RATES IN RELATION TO FREE RADICAL SCAVENGING ACTION

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Abstract:

Phytochemicals, that is, chemicals present in various plants and herbs , are now becoming important candidates for development of drugs.Wide range of medicinals plants {Plants from which potential photochemicals are isolated for development of drugs for treatment of diseases}present in South Asian countries have now been increasingly utilized for development of phytomedicines. Treatment with ethanol extract of leaf of Cajanus indicus Spreng at a dose of 50 mg /kg body weight for 20 days, after induction of hepatotoxic damage by CCl_4, produce significant elevation of the hepatic injury. The liver marker enzymes like(Aspartate Transaminate) AST, GGT(Gamma Glutamyl Transferase), ALT(Alanine Transaminase) and ALP(Alkaline Phosphatase) decreased significantly at the above dose showing the optimum effect against hepatic damage. The liver antioxidant enzymes SOD, catalase, glutathione peroxidase, glutathione reductase and glutathione transferase and the membrane damaging indicators TBARS(Thiobarbituric Acis Reactive Species), conjugate diene and marker of glutathione status indicate the mechanism of healing action to be due to scavenging of free radicals or ROS. The results thus gives a confirmatory proof that the healing action of ethanol extract of leaf of Cajanus indicus Spreng is for shifting of equilibrium from the peroxidant to antioxidant side and the leaf acts as a natural antioxidant and healer of CCl_4 induced hepatotoxicity.

Key words: *Cajanus indicus* Spreng; CCl_4; Hepatotoxicity, Antioxidant.

Introduction:

The leaf of *Cajanus indicus* Spreng (Leguminosae family) which is commonly known as *arhar pata* in Bengali is a widely grown plant in large parts of India and South-West Asian countries, particularly in the regions of subtropical humid climate. In the Indian traditional system of medicine. Extract of leaf of *Cajanus indicus* Spreng has been reported to have prominent healing effects against trauma, and significant hepatoprotective and anti-inflammatory activity[1-3] . However no systematic scientific investigations have been done to understand the biochemical mechanism of action. As the extract of the leaf has been found to give relief against liver diseases particularly Hepatitis A while the liver injury has been proven to be due to damage by free radicals or reactive oxygen species (ROS)[3,4]. Hence the present study was undertaken to evaluate the curative effect of leaf extract against CCl_4 induced hepatic injury and to elucidate any relation with its antioxidant activity.

Materials and Methods:

Plant material

Leaves of *Cajanus indicus* Spreng were collected from the local market in Kolkata in the months of November –December. Authenticity was established by experts of Botanical Survey of India, Shibpur , Hawrah. The leaves were thoroughly washed in water and then soaked in 900 ml of 95% ethanol for 7 days with intermittent shaking. On the 8th day, the whole material was filtered through nylon mesh. The

filtrate was collected and concentrated under reduced pressure. The residual solvent was removed under vacuum in a rotary evaporator and the solid brownish red mass obtained (8.7% w/w) was kept in a vacuum desiccator at 4^0C until used for further studies.

Animal and treatment:

Healthy, pathogen free, colony bred, adult male Charles Foster rats (150-200g) were used in this experiments. The animals were housed in environmentally controlled rooms (25 ± 1^0C) with 12hr: 12 hr light: dark schedule and fed with pellet food (Hindustan Lever, India) ad *libitum* and had free access to water. All chemicals used were of analytical grade. Chemicals were purchased either from Sigma Chemicals Co. (St Louis, MO, USA) or E-Merck (Germany) and SRL (India).
Animals were divided into following 3 groups of 6 animals each.
Group 1: Controls, which received subcutaneously liquid paraffin (lp) twice a week at the dose of 3 ml/ kg body weight.

Group II: The animals in which liver damage was indicated by subcutaneous administration of CCl_4 (0.1 ml/100 g body weight) + lp twice a week.

Group III: Animals were the same as in Group II above. Additonally they received the ethanol extract daily at the dose of 50 mg/Kg body weight as suspension in 1 ml water orally.

The animals were kept for 20 days. Animals were fasted over night on the 19th day and were sacrificed on day 20 by decapitation .Blood was collected from incision of jugular vein and serum was prepared from the collected blood. The liver was dissected out, rinsed in phosphate saline buffer (pH 7.4) and immediately preceded for biochemical estimations.

The measurement of thiobarbituric acid reactive substances (TBARS) was done as an index of lipid peroxide (LPO) , conjugated diene(CD) content was found out by the method of Klein[6]. The activity of superoxide dismutase (SOD), one of the most prominent antioxidant enzymes in the eukaryotic defense machinery against ROS damage was determined by the method of McCord and Fridovich[7]. The assay procedure involved the inhibition of epinephrine auto oxidation in an alkaline medium (pH 10.2).

The enzyme activity was expressed in arbitrary units considering 50% inhibition in the reaction mixture under the experimental condition as one unit of SOD. Catalase activity was determined according to the method of Luck *et al*[8]. Reduced glutathione (GSH) or the total sulphhydryl group was measured according to the method of Ellman with minor modifications. Glutathione peroxidase (GPX) was assayed by the method of Rotruck *et al*[10]. Glutathione transferase (GTS) and glutathione reductase (GRD) were assayed by the methods of Habig *et al* [11]and Racker[12].

Statistical analysis was carried out using Analysis of Variance (ANOVA) test followed by using Student "t" tests to estimate the level of significance among the mean ± SE values in different groups of animals.

Results and Discussion:

Table 1: Effects of Ethanol extract of leaf of Cajanus Indicus Spreng on the antioxidant status.

Parameters	Group I	GroupII	GroupIII
Thiobarbituric acid reactive species [μM /mg protein],	1.36±0.04	0.76±0.04 ,	1.14±0.26
Diene Conjugate (μM /100g tissue),.	0.28±0.05,	84±0.08,	0.33±0.09
Reduced glutathione (μM /100g tissue),	366.2±19.83,	206.1±5.57	324.0±34.94

Values are mean ± SEM of 6 animals in each group.
*P< 0.01as compared to group.
**P<0.001as compared to group I

Table 2: Effect of Ethanol extract of leaf of Cajanus indicus Spreng on activity of ROS (Reactive Oxygen Species) scavenging enzymes

Parameters	Group I	Group II	Group III
Superoxide dismutase (U/mg protein)	15.98±1.59	7.64±0.94	11.55±0.77
Catalase (U/mg protein)	7.56±0.78	4.40±0.85	7.08±0.88
Glutathione Peroxidase (U/mg protein)	0.85±0.09	0.50±0.01	0.73±0.05
Glutathione Reductase (U/mg protein)	6.71±0.39	3.02±0.15	6.01±0.36
Glutathione transferase (μM/mg protein)	8.50±0.34	16.05±1.04	8.63±0.48

Values are mean ± SEM of 6 animals in each group.
*P< 0.01as compared to group
**P<0.001as compared to group I

Table 3: Percentage of hepatoprotection offered by ethanol extract of leaf of Cajanus Indicus Spreng in respect of liver marker enzymes.

Treatment (mg/ kg body weight)	**Percentage of relative decrease of enzyme markers**			
	AST (Aspartate Transaminase)	GGT (Gamma Glutamyl Transferase)	ALT (Alanine Transferase)	ALP (Alkaline Phosphatase)
25	20.76±1.60	17.90±1.20	20.21±1.17	15.73±1.48
50	9.82±0.87	8.10±0.62	8.83±1.06	7.48±0.74
75	27.07±3.33	18.37±1.36	15.57±1.97	18.28±1.12
100	69.50±5.41	62.84±2.27	74.15±1.77	66.78±3.03

Values are mean ± SEM of 6 animals in each group.
*P< 0.01as compared to group
**P<0.001as compared to group I

The study reveals the hepatoprotective action of the medicinal plant and that phytochemicals present in the plant are responsible for the above action , which can well be utilized for development of antihepatotoxic drug.The action of the phytochemicals is due to the antioxidant action , as now free radicals[Species with unpaired electrons produced by various biochemical reactionswithin the body] have been found to be the underlying cause of various diseases from hepatic injury, gastric ulcer, heart diseases and immunological reactions.The ethanolic extract of leaf of *Cajanus Indicus Spreng* exhibited significant protection against CCl_4-induced hepatic damage, as is evident from the various biochemical parameters related to the hepatic conditions in Eukaryotic system.

Treatment with CCl_4-induced significant damage and the effect of CCl_4 has now been established to be due to the reactive oxygen species (ROS) .As is evident from the decrease in level of the antioxidant enzymes.The level of the liver marker enzymes decreased within the range of 25-100 mg/Kg body weight in case of treated animals as compared to untreated control.

That the prooxidant antioxidant balance is essential in free radical mediated injuries in eukaryotes is now being emerged as a vital alternative[13,14,15] to the long termed and established medical theories. Oxygen toxicity and resultant generation of most aggressive reactive oxygen species (ROS) result in consequent tissue damage and necrosis.

CCl_4 mediated hepatotoxic injury, have taken as a model for liver injury is established by the mechanism of CCl_4 accumulated in hepatic parenchymal cells and metabolically activated by cytochrome P-450 dependent mono oxygenases to form a trichloromethyl free radical (CCl_3.). Thus alkylating cellular proteins and other related biological macromolecules with a simultaneous attack on polyunsaturated fatty acids and with a consequent formation of lipid peroxides leading to hepatic damage.

The study reveals that leaf of *Cajaus indicus Spreng* at a dose of 50 mg /kg body weight maximally protects hepatic damage caused by CCl_4 and the mechanism is believed to be due to free radical scavenging one. The results involving aspartate aminotransferase (AST), alanine aminotransferase (ALT), alkaline phosphatase (ALP) and gamma glutamyl transpeptidase (GGT) confirms the proposal of protective mechanism. The SOD, CAT, GPX and GRD, which maintains the intricate balance of prooxidant antioxidant ratio, are increased showing the utility of balance towards antioxidant side is a major healing indication.

Elevated level of TBARS and CD observed in CCl_4-treated animals indicates excessive formation of free radicals and activation of LPO system resulting in hepatic damage. TBARS produced as byproducts of LPO that occurs in hydrophobic core of biomembranes. The significant decline in these concentrations of these constituents in the liver tissue of extract of leaf of *Cajanus indicus Spreng* administration rats indicates anti-lipid peroxidative effect of the leaf extract.

GSH is a major non-protein thiol in living organisms, which plays a central role in co-ordinating the body's antioxidant defense processes. Perturbation of GSH status of a biological system has been reported to lead to serious consequences. Decline in GSH content in the liver of CCl_4-intoxicated rats, and its subsequent return towards near normalcy in extract of leaf of *Cajanus indicus Spreng* treated rats reveal antioxidant effect of the leaf extract.

Explanations of the possible mechanism underlying the hepatoprotective properties of drugs include the prevention of GSH depletion and destruction of free radicals. GTS also plays an essential role in liver by eliminating toxic compounds by conjugating them with glutathione. GRD is concerned with the maintainance of cellular level of GSH (especially in the reduced state) by effecting fast reduction of oxidized glutathione to reduced glutathione. Thus it can be concluded that a possible healing action of extract of leaf of *Cajanus indicus Spreng* and the mechanism is by free radicals scavenging pathway of the plant extract.

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ONE YEAR EXPERIENCE OF OMOM CAPSULE ENDOSCOPY FOR SUSPECTED SMALL INTESTINE LESIONS

Khadka Mohan, Tao Xiaohong, Chen Dao- Rong, Wang Shun-Wen and Gu Sai

Abstract:

Background: Capsule endoscopy (CE), is a superior non-invasive tool in the diagnosis of suspected small bowel lesions to conventional modalities. This study has been carried out with the aim to share the experience and to evaluate the efficacy of OMOM CE. The objectives have been set to find out and compare the diagnostic yields of the CE for obscure gastrointestinal bleeding (OGB) and unexplained abdominal pain and/or diarrhea and also to see the cost effectiveness and quality of the CE.
Methods: OMOM CE examination was conducted in consecutive 46 admitted patients presented with suspected small intestinal lesions over a period of one year. The indications were OGB, unexplained abdominal pain and diarrhea.
Results: Abnormal findings were revealed in 42 out of which 36 subjects revealed significant abnormal findings in small bowel. Overall diagnostic efficacy of the CE was 80% and Diagnostic yield was significantly higher for OGB (26/27) in comparison to unexplained abdominal pain and/or diarrhea (96.30% vs 55.55%, P < 0.001). Angioectasia was the major finding for OGB cases. No complications were observed with the CE examination.
Conclusion: OMOM CE has high diagnostic yield for OGB and unexplained abdominal pain or diarrhea and effectiveness is comparable with Pillcam CE.

Key Words: Angioectasia, Capsule endoscopy, Obscure gastrointestinal bleeding, Unexplained Abdominal pain or Diarrhea

Introduction:

Diagnosis of suspected small bowel lesions was always difficult due to their inaccessibility and poor compliance by conventional modalities. Conventional modalities like push enteroscopy, enteroclysis are having low diagnostic efficacy and associated with technical difficulty both for the doctors and patients. The novice non invasive technology used in our study allows us to reveal the whole small bowel more particularly mucosal lesions, which was comparatively not possible by the conventional invasive methods. According to Lewish BS and Swain CP1, 2, push enteroscopy has only the accessibility up to mid-jejunum so that lesions in the remaining part of small intestine cann't be visualized.

Endoscopic visualization of the entire small bowel can only be carried out with

sonde enteroscopy or intraoperative enteroscopy which are invasive and technically difficult modalities3-6. Double balloon endoscopy (DBE) is also a new technology to explore lesions in suspicious small bowel lesions which can access to whole small intestine. Fukumoto A et al. found that the diagnostic ability of DBE is nearly equal to that of CE7. However, in many suspected small-bowel bleeding lesions, CE should be selected for the initial diagnosis and DBE for the treatment or histopathological diagnosis after detection of the bleeding site on CE8. DBE is an invasive and uncomfortable procedure whereas, video capsule endoscopy (CE) permits non-invasive way of capturing whole small bowel images with good compliance from the patients.

There are already ample of study results showing superiority of this innovative technique over the conventional modalities. From 2001 onwards, Pillcam CE (Given Imaging, Yoqneam, Israel) has been widely used around the world including Southeast Asia which costs around 1000$. But since marketing of OMOM CE (Jinshan Science and Technology Company, Chongqing, China) from 2005, the OMOM CE is replacing the use of Pillcam CE especially in Europe, Africa and China because of its easy availability and lower cost (less than half of Pillcam CE).
In our study, the aim was to find out the diagnostic yield of OMOM CE in various small bowel indications.

Material and Method:

All patients in the study were recruited from 1st December, 2008 to 20th January, 2010 at the Department of Gastroenterology of First Affiliated Hospital of Chongqing Medical University. The study was approved by the Ethics Committee of Chongqing Medical University's First Affiliated Hospital and informed consent was taken from each patient.

The results of the findings in consecutive forty-six patients (24 males, 22 females) during the period of a year were retrospectively reviewed (Table 2). The mean age of the patients was 53.28±16.93 (range, 15-81 years). The indications for the study were obscure gastrointestinal bleeding i.e. OGB (28 patients), unexplained abdominal pain predominant (15 patients), unexplained persistent diarrhea predominant (3 patients). Before the CE examination, all patients were undergone routine blood test, stool test, urine test and upper gastrointestinal endoscopy and colonoscopy. In addition, particularly patients with abdominal pain were also undergone abdominal ultrasound and CT scan. A few cases of OGB also underwent small bowel barium follow- through to exclude structural lesions. Some patients were also undergone repeated conventional endoscopies two times or more.

Technique used:

All patients were kept on liquid diet on the day prior to the test. Magnesium hydroxide and Polyethylene glycol were

used as laxative preparations before the test. On the previous day of the test at 6:00 PM, 80 ml of 40% magnesium hydroxide was given orally. Then at the same day midnight, they were given Polyethylene Glycol (PEG; 137 gm) in 2 L of drinking water. On the day of the test at 6:00 AM, they were given Dimethicone powder (4.75 gm) as air bubbles removal and after half an hour sensors were attached to eight locations on the anterior abdominal wall. A belt containing data recorder set (Image 1) was positioned outside the anterior abdominal wall. Patients then swallowed the OMOM Capsule with a mouthful of water.

The course of the CE was monitored through computer station to make sure that it reached to the stomach and then asked the patient to lie in bed on right lateral side for an hour to facilitate the entry of the CE from stomach to duodenum. After an hour again the location of the CE was checked through a small screen monitor (new generation OMOM) which can detect the location of CE inside the body and in almost more than 90% cases, the CE successfully passed to duodenum but in few cases it still remained in the stomach for which gastroscope was used to transfer it into duodenum.

The patients were kept nil oral for 2 hours after intake of CE. Then they were allowed to drink clear fluid and after an additional 2 hours were permitted to walk around. As soon as the battery life was finished during the procedure, the recorder was removed and the data were transferred to the computer workstation through a high capacity digital link. After the examination was over, all patients were asked about complaints they feel related with the examination.

Interpretation of results and statistical analysis:

The images were reviewed by three gastroenterologists and final interpretation was made after having discussion among at least four gastroenterologists including one professor. Quantitative variables were expressed as mean±SD values, qualitative variables as percentages, and these variables were compared by means of a $\chi 2$-test. A P value<0.05 was considered significant

CE Image findings interpretation:

Currently there is no standard system of classification for CE image interpretation. The wide range of diagnostic yields reported in different studies partially reflects differences in image interpretation. We used the following criteria for image interpretation of CE findings:

A*ngioectasia*: abnormally dilated blood vessels with or without oozing, a flat red mucosal lesion with visible border or legs

Chronic enteritis: signs of inflammation, erosions, ulcers

Inflammatory lesions: areas of redness, edema

Erosion: An interruption of the mucosal lining without visible depth

Ulcer: an interruption of the mucosa with visible depth.

Results:

The average gastric emptying time (based on 40 patients) was 57 ± 44 mins (range 1 to 165 mins). In 4 patients, gastroscope was used to shift the CE because of narrowing of lower part of esophagus possibly due to some mass compression from outside of esophagus. In 38 out of the 45 patients, the capsule passed the ileocecal valve within the duration of the examination. The mean small bowel transit time (based on 38 patients) was 341 ± 104 mins (range 80 to 540 mins). The average total operating time in 40 patients was 503±58 mins (range 300-590 mins). Total photos captured by CE in 32 patients recorded were 53,254 in averages until battery life was finished. The demographic variables of patients have been shown in table 1. CE examination was unsuccessful in one patient. In the patient from stomach to duodenum because of unusually taking long time and in one patient from esophagus to duodenum

of 59 year old female with overt OGB, the capsule did not pass through pylorus due to pyloric stenosis secondary to healed peptic ulcer. All patients said that the CE examination procedure was highly comfortable unlike invasive endoscopies and contrast radiological studies. No patients encountered any complaints related to the capsule used. In overall, significant findings were observed in 36 out of 45 patients accounting 80% as diagnostic yield of CE. Significant findings were identified in 26 out of 27 patients (96.30%) with OGB including active bleeding sites in 8 patients. CE didn't reveal any abnormality in one patient of overt OGB.

For unexplained chronic abdominal pain and/or diarrhea cases, significant lesions were found in 10 out of 18 patients with diagnostic yield of 55.55%. Among 18 cases of mixed or isolated abdominal pain or diarrhea, 15 were abdominal pain predominant and 3 were diarrhea predominant. Angioectasia was also found as an additional coincidental finding in 5 patients and only angioectasia were found in further 2 cases which were regarded as non significant findings as there is no literature published which claims any association between angioectasia and abdominal pain or diarhhea till the date. In 6 patients with predominant abdominal pain, findings were observed in stomach, duodenum and/or colon which were previously found with conventional endoscopies too and hence they were categorized here as non significant findings by CE in the sense of not revealing new lesions in suspected small intestine. No abnormal findings were observed in 2 patients of unexplained abdominal pain predominant. Among 3 patients of unexplained predominant chronic diarrhea, significant findings were revealed in all. Chronic enteritis was found in all three cases along with angioectasia too. In addition, lymphoectasia was uncovered in one case and enterointestinal fistula in one among them.

Table 1 Demographic characteristics of the patients with clinical symptoms *

	Overt OGB	Occult OGB	Abdominal pain (predominant)	Diarrhea (predominant)
No of Patients (n=45)				
Age ranges in years				
15-29	5	3	8	0
30-44	4	1	3	1
45-59	7	3	5	1
60-74	4	0	5	1
>74	4	0	2	0
Sex				
Male (n=24)	9	3	10	2
Female (n=22)	15	1	5	1

*including one case of CE examination failure

Table 2 Comparison of CE findings* in small intestine, between OGB and abdominal pain and/or diarrhea

	OGB (Percentage)	Abdominal pain/Diarrhea (Percentage)
Number of cases (n=45)	27	18
Total case Positive findings cases	26(96.30%)	10 (55.55%)
Types of lesion		
Angioectasia	16 (59.26%)	13 (72.22%) ‡
Chronic enteritis	6 (22.22%)	5 (27.78%)
Parasites	6 (22.22%)	0
Ulcers†	5 (18.52%)	0
Polyp or polyp like lesions	3 (11.11%)	2 (11.11%)
	2 (7.40%)	3 (16.67%)
Diverticulum	1 (3.70%)	0
Crohn's disease	1 (3.70%)	0
Adenocarcinoma	0	1 (5.56%)
Lymphoectasia	0	1 (5.56%)
Enterointestinal fistula		

*In 64% of cases, multiple types of lesions present.

†One case is T.B. ulcer. ‡Non significant findings in case of abdominal pain or diarrhea

Repeat CE was performed in a female patient of 58 year old suffering from unexplained abdominal pain after 3 months of treatment in line of chronic enteritis (multiple erosions and ulcers). Her ulcers were almost recovered and still had some erosion and additionally some angioectasia were seen in repeat CE. A 63 year old female patient presented with overt OGB with history of cirrhosis and splenomegaly and therefore had splenectomy, found to have angioectasia mainly in the form of abnormally dilated blood vessels with oozing from some.

The diagnostic yield of OMOM CE for small bowel lesions was significantly higher in patients of OGB (96.30%) than in patients of unexplained abdominal pain and/or diarrhea (55.55%) ($\chi 2=11.203$, CI=99%, $P<0.001$).

Discussion:

In daily practice, available imaging techniques of the small intestine consists of push-endoscopy and X-Ray studies which include small bowel follow through, enteroclysis, CT enterography. For last few years double balloon endoscopy (DBE) is also in practice in few centers. According to literatures, usually DBE is helpful if it is performed in prior indeterminate or negative findings for OGB cases already done by CE9, 10, 11. In most cases, upper GI endoscopy can easily reach up to the second part of the duodenum. Push Enteroscopy can demonstrate sites of lesions up to mid jejunum 1, 2. Biopsy is also possible during enteroscopy. Push and sonde enteroscopies have been used for revealing the small intestinal lesions, but these techniques are not easy to neither carry out nor give a high diagnostic yield. In radiological studies, diagnostic accuracy of any small bowel pathology is often low as well as uncomfortable. Overall visualization of the mid and distal portion of small bowel seems unsatisfactory with modality other than CE. Regarding the difficulty for evaluation of occult GI bleeding, which has often been attributed to a source in the small intestine, many patients finally undergo surgery without knowing the actual source of bleeding. CE has shown a good diagnostic tool in patients with obscure gastrointestinal bleeding12-19. Ell C et al. stated that CE can help reduce the number of diagnostic procedures and could become the initial diagnostic choice in patients with OGB20. In several clinical studies, it has been shown that this modality may be superior to push enteroscopy20-26, small bowel series12, 27, enteroclysis28 and CT scan29 in identifying small bowel lesions in obscure gastrointestinal bleeding.

According to Tang SJ et al., the diagnostic yield of CE for the suspected bleeding source in obscure GI bleeding has been reported from 38% up to 93%14. In our study, this modality demonstrated the source of bleeding in 26 out of 27 patients (96.30%) presented with OGB which is the highest yield till date in the literature. According to literature20, for patients suffering from OGB, CE revealed definitive diagnoses as follows: angioectasia 53%, tumor 6.3% and inflammatory lesions 6.3%. In our study, the findings for OGB patients (Table 2) came out as angioectasia (59.26%), chronic enteritis (22.22%), parasites (22.22%), and ulcer (22.22%) including one case of TB ulcer, polyp or polyp like

lesions (11.11%), diverticulum (7.40%), Crohn's disease (3.70%), and GI stromal tumor (3.70%).

Parasites were also involved in causing OGB. Hookworms may cause overt intestinal bleeding as reported in few case reports30, 31, 32. Round worms i.e. Ascaris lumbricoides found by CE in intestine have also been reported to be the cause of overt OGB in few cases33. In our study, CE found parasites infestation in 6 cases of OGB with hookworms (Figure 1) in 4 and round worms in 2. Ascaris Lumbricoides often cause intestinal obstruction as recorded in the literature34; however our study showed that the round worms can also cause OGB.

CE is a superior and more sensitive diagnostic tool than barium follow-through and entero-computerized tomography in patients with suspected Crohn's disease29, 35. CE is effective in diagnosing patients with suspected Crohn's disease undetected by using conventional diagnostic methods36-40. We had findings in favor of Crohn's disease in two patients of overt OGB. However Tuberculosis (Figure 2) was diagnosed in one case later on by methodology of therapeutic trial and in another case same diagnosis of Crohn's disease (Figure 3) was confirmed by further treatment trial in regard to clinical improvement with prednisolone.

According to literature, CE did not play an important role in the evaluation of patients with unexplained abdominal pain41, 42. In patients with undiagnosed abdominal pain, the yield of CE appears to be low43, 44. However May et al.45 disclosed relevant findings in 36% and 40% of patients by two investigators. About chronic diarrhea of unknown origin, the diagnostic yield by CE was very low according to Fry LC and colleagues44. In other study, Li et al.46 recently discovered diagnostic yield of CE as 53.3% for abdominal pain and/or diarrhea case. In line with the study outcome45, 46, our study revealed significant findings in 10 patients out of 18 accounting 55.55% diagnostic yield in patients with unexplained abdominal pain and/or diarrhea. It has clearly shown the need of further large series of prospective study to show the possible high efficacy of CE for unexplained abdominal pain or chronic diarrhea too.

The clinical use of CE is rapidly expanding. Till date, the mostly used CE around the world since 2001 is the Pillcam CE from Israel. The cost of Pill CE examination in Southeast Asia is around 1000$ which is expensive in comparison to OMOM CE from Chongqing, China launched since 2005, which just costs approximately 500$. The structure and technical parameters of OMOM CE are similar to Pillcam CE. Moreover, real-time images can be viewed and capsule position inside the body can be estimated only by OMOM CE. Our hospital imported OMOM CE in November, 2008 and started clinical application in indicated patients.

According to Li et al.46 the overall diagnostic efficacy of OMOM CE for suspected small bowel lesions is 70.5% and our study showed it as 80%. The diagnostic yield of Pillcam CE is 68% in average according to published studies12-19. Therefore, OMOM CE seems to have comparable diagnostic yield with that of Pillcam CE.

Our study had few limitations such as we could not recruit all the patients in the

department who were clearly indicated for CE examination because of high examination cost, its limitation to only diagnostic role and lack of regular follow up in many cases.

A few interesting cases:

1. CE revealed a jejunal tumor [Figure 4] with active bleeding in an old patient suffering from anemia with overt OGB. Surgical biopsy report later disclosed the tumor as Adenocarcinoma.
2. A 15 year old female patient who presented with overt OGB had retention of CE for 17 days but remained asymptomatic during the period. In the beginning she was clinically suspected with tuberculosis but the CE examination later revealed only angioectasia.
3. A 19 year old boy presented with chief complaint of melena, was found to have diverticulum in ileum with outlet inflammation (Figure 5).
4. CE remained in small intestine for almost 3 months without any complication in a 43 year old man who was suspected with intestinal tuberculosis after the CE findings and got improved with ATT trial of one month and the therapy was further continued.
5. A 71 year old female patient who presented with chief complaint of chronic diarrhea, had history of resection and anastomosis of small intestine 20 years back for treatment of lower GI bleeding due to angioectasia. She was found to have enterointestinal fistula along with chronic enteritis.
6. Most of the patients who were found to have multiple erosions, ulcers in small intestine in addition to stomach had history of NSAIDs consumption for a long time period.

Conclusion:

In our relatively small pool of cases, we found that OMOM CE is highly diagnostic endoscopic technique particularly in diagnosing obscure GI bleeding and it also shows promising outcome in diagnosis of unexplained chronic abdominal pain and unexplained diarrhea. In Southeast Asia, OMOM CE may be better choice for indicated patients with regard to its relatively lower cost and presumably comparable with Pillcam CE for diagnostic yield and safety.

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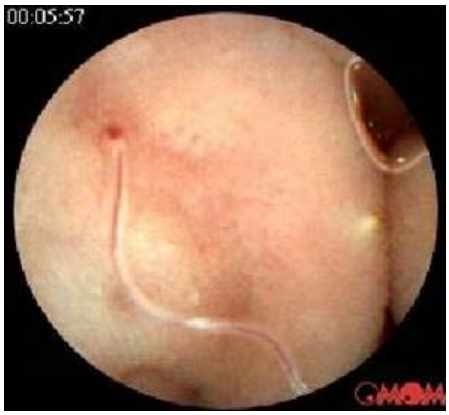

Figure 1: Hookworm sucking blood

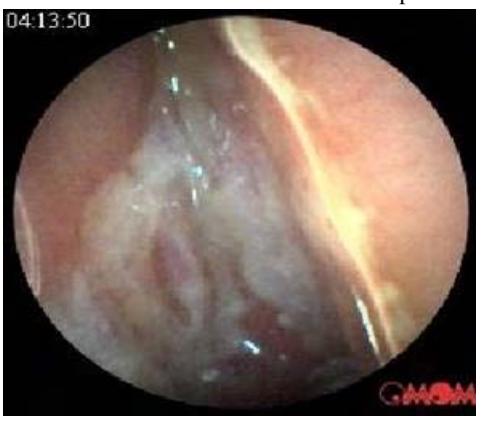

Figure 2: Ileal TB ulcer

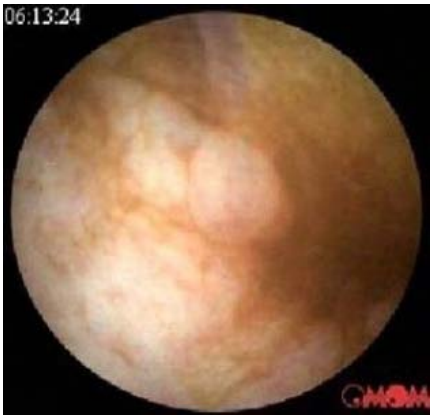

Figure 3: Crohn's Disease

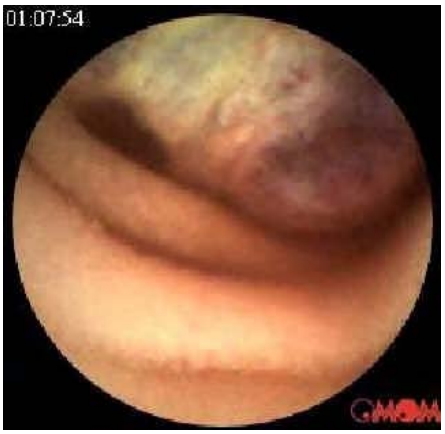

Figure 4: Adenocarcinoma

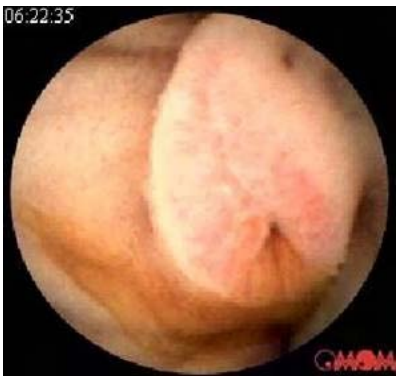

Figure 5: Diverticulitis at outlet

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PREVALENCE AND SIGNIFICANC OF IRON DEFICIENCY ANAEMIA AMONG PEOPLE OF MORNAG DISTRICT OF NEPAL

Sinha Amar Kumar, Majumdar Biswajit and Yadav Shrawan Kumar

Abstarct:

Iron deficiency anaemia is one of the most dangerous and devastating causative form of malnutrition in developing countries, where special care should be taken from the health community to address the problem in South East Asian countries, 1.3-2.2 billion population is affected according to world health organization. Fifty percent of women and children and 60% of gross anemic women of developing nations have been adversely affected till date. The most common cause of iron deficiency anaemia is due to inadequate intake of iron in diet, physiologic demands of pregnancy and rapid growth and loss due to parasitic infections. Other prevalent causes of anaemia include malaria, chronic infections and nutritional deficiencies of vitamin A, folic acid and Vitamin b-12. The study reveals that 25.57 % of patients have been suffering from iron deficient anemia.

Key Words: Iron, Anaemia, Nepal

Introduction:

Iron deficiency anaemia is one of the major concerns in health, mainly focusing the developing countries like Nepal. The World Health Organization identifies iron deficiency anaemia as the most common anaemia[1]. Almost 2 billion people are affected worldwide. In developing countries, this high rate has been related to insufficient iron intake, accompanied by chronic intestinal blood loss due to parasitic and malarial infections[4]. Iron deficiency anemia affects 3% children under 2 years of age, up to 9-11 % adolescents female and less than 1% of adolescent males[3]. Reduction of iron deficiency anaemia is an area, to be taken care of with utmost urgency.

Iron deficiency anaemia leads to lost productivity and premature death in adults [24]. It is also associated with prenatal complications like low birth weight, premature delivery and associated health problems[5], long-term effects including Increased susceptibility to infection and poor growth, risk for developmental and behavioral delays in children including lower mental and motor test scores[24]. Some evidence suggests that severe iron deficiency anaemia may cause behavior and learning problems, persisting throughout childhood [2].

To address the problem, prevalence of iron deficiency anaemia was investigated in Biratnagar, Morang district, Nepal, taking sample data from 262 patients in both out patients and inpatient department. The main objective was to investigate iron deficiency anaemia by age and sex and to establish the statistical correlation between iron, TIBC (Total Iron Binding Capacity), Ferritin and hemoglobin in Iron Deficiency Anaemia.

Materials and Methods:

Measurement of Serum Iron Profile:

Serum Iron Estimation:

Abnormal levels of iron are characteristics of many diseases, including iron deficiency anaemia and haemochromatosis. Up to 70% of iron is found in hemoglobin of RBCs. The other 30% is stored iron in the form of ferritin and hemosiderin. About 10% of the ingested iron is absorbed in the small intestine and transported to the plasma. There the iron is bound to the globulin protein called transferrin and carried to the bone marrow for incorporation into haemoglobin. The serum iron determination is a measurement of the quantity of iron bound to transferrin.

TBC (Total Iron Binding Capacity) and Transferrin:

TBC is a measurement of all proteins available for binding mobile iron. Transferrin represents the largest quantity of iron-binding proteins.Therefore TIBC is an indirect, yet accurate measurement of transferrin. During iron overload, transferring levels stay the same or decreases, whereas the other less common iron-carrying proteins increase in number. In this situation, TIBC is less reflective of true transferring levels. TIBC is increased in 70% of patients with iron deficiency. Transferrin is also negative acute-phase reactant protein.
TIBC

Serum Iron Estimation:

Serum iron is estimated after dissociation of iron transferring bound in acid medium, when ascorbic acid reduces Fe^{3+} into $Fe2^{+}$. The reduced iron then form a coloured complex with 3-(2-pyridyl)-5, 6 difuryl 1, 4 triazine-disulfonate (ferene).The absorbance thus measured at 600 nm (580-620) is directly proportional to the amount in the specimen. Thiourea is added in the reagent to prevent copper interference.

Determination of TIBC:

TIBC is evaluated after saturation of the transferring by an iron solution and adsorption of excess iron on Magnesium Hydroxide Carbonate. After centrifugation, iron is measured in the supernatant colorimetrically with the iron ChromazurolBor iron Ferrozine method.

Estimation of ferritin:

In the Ekonzyme Ferritin assay, two monoclonal antibodies are used in an immunoenzymatic assay system, which incorporates magnetic solod phase separation.Fixed amounts of fluorescein-conjugated antiferritin monoclonal antibody conjugated to alkaline phosphatase are added and incubated at 37 °C. During the incubation, the fluorescein-antiferritin and alkaline phosphatase-antiferritin monoclonal antibodies bind to discreet sites on the ferritin molecule forming a sandwitch. At the end of the incubation period antifluorescein coupled to a magnetic solid phase is added in excess. This rapidly and specifically binds to the ferritin-antibody complexes and is sedimented in a magnetic field. After aspirating the liquid phase and washing the solid phase, a solution of the enzyme-substrate, phenolphthalein monophosphate is added to the tubes and incubated at 37°C. After incubation, the enzyme reaction is stopped by the addition of a stop reagent and the intensity is used for estimation of concentration.

Results:

The study was carried out at the Department of Biochemistry, Nobel Medical College and Teaching Hospital, Biratnagar, Nepal. Samples were collected from patients of at a random basis, based on random sampling techniques, and estimation and calculations were done in the above department. The patients were found to be from Morang District, Nepal and accordingly inferences have been established.

Table-1: Prevalence of Iron Deficiency Anaemia

Total Cases	Iron Deficiency Anaemia	Incidence
262	67	25.57

Table-2: Distribution of Patient according to sex

Gender	Number of Patients	Percentage
Male	124	47.32
Female	138	52.68
Total	262	100

Table-3: Prevalence of Iron Deficiency Anaemia according to sex.

Sex	Number of Patients	Percentage	Sex Ratio (Male:Female)
Male	26	9.92	
Female	41	15.65	
Total	67	25.57	1:1.58

Table-4: Distribution of patients according to age and sex

Age Group (Years)	Number of Patients	Sex		Percentage	
		Male	Female	Male	Female
≤20	17	6	11	8.96	16.42
21-40	25	6	19	8.96	28.36
41-60	17	6	11	8.96	16.42
>60	8	2	6	2.99	8.96

Table-5: Prevalence of Iron Deficiency Anaemia with Iron, TIBC, Ferritin and Haemoglobin according to age and sex

Age Group (Years)	Iron (µg/dL) Mean± Standard Deviation		TIBC(µg/dL) Mean ± Standard Deviation		Ferrritin(µg/dL) Mean ± Standard Deviation		Haemoglobin (mg/dL) Mean ± Standard Deviation	
	Male	Female	Male	Female	Male	Female	Male	Female
≤20	29.25 ± 0.75*	23.50 ± 0.42	523 ±16.30	432 ± 99.42**	13.34 ±0.62	9.24 ±0.44*	9.52 ±0.72	8.42 ±0.24*
21-40	18.34 ±2.42*	22.61 ±0.84	412.56 ± 36.44	496.44 ± 56.82	8.42 ± 0.44*	9.12 ±0.46	9.12 ±1.22	8.54 ±0.42
41-60	23.78 ±1.42	27.12 ±3.42	388.42 ±22.78	514.22 ±46.86	10.12 ±0.64	10.12 ±0.24**	10.24 ±0.46	8.92 ±0.72
>60	28.94 ±2.44	26.42 ±4.26*	364.58 ±48.92	394.46 ±65.23	9.8 ±2.62*	10.10 ±2.62	9.67 ±1.24	9.54 ±0.64**

P<0.01 p>0.05

Discussion:

Iron deficiency anaemia is one of the most dangerous and devastating causative form of malnutrition in developing countries , where special care should be taken from the health community to address the problem in South East Asian countries, !.3-2.2 billion populations is affected according to world health organization.50% of women and children and 60% of gross anemic women of developing nations have been adversely affected till date. The most common cause of iron deficiency anaemia is due to inadequate intake of iron in diet, physiologic demands of pregnancy and rapid growth and loss due to parasitic infections. Other prevalent causes of anaemia include malaria, chronic infections and nutritional deficiencies of vitamin A, folate and Vitamin b-12. The study reveals that 25.57 % of patients have been suffering from iron deficient anaemia.

The study reveals that iron deficiency anaemia is most frequent in the female age group of 21-40, that the rate of incidence is very much associated with pregnancy .Hemoglobin and Total iron has been found to correlate directly with the incidence of Iron deficiency anaemia, although ferritin and total iron binding capacity do not possess direct correlation ship with the incidence. This finding has significant clinical importance, as replenishment of iron only can eradicate the incidence of iron deficient anaemia to a significant

extent. 9.92% of total patients are male with the disease and 15.65% of patients are female with IDA [Iron Deficient Anaemia].The ratio suggest a blunt inference that females are more susceptible to the disease. That the highest percentage of patients with IDA are females within the age group of 21-40,that is the most reproductive age , which most adversely affect the process of pregnancy and associated health issues. This is followed by the age group below 20 and 41-60.The worst affected are the women who need iron supplementation and caring for the decrease of the incidence and complications.

Pregnancy, adolescence, periods of rapid growth and an intermittent history of blood loss of any kind should alert the clinician to possible iron deficiency. Signs related to iron deficiency depend upon the severity and chronicity of the anaemia in addition to the usual sign of anaemia –fatigue, pallor and reduced exercise capacity.

The serum iron level represents the amount of circulating iron bound to transferrin. The TIBC is an indirect measurement of the circulating transferrin. A transferring saturation rate of >50% indicates that a disproportionate amount of the iron bound to transferring is being delivered to nonerythroid tissues.

Free iron is toxic to cells, and because of the toxicity, the body has established an elaborate set of protective mechanism to bind iron in various tissue compartments. Within cell, iron is stored complexed to protein as ferritin or hemosiderin.Under steady state conditions, the serum ferritin level correlates with total body iron stores; thus, the serum ferritin level is the most convenient laboratory test to estimate iron stores. Evaluation of bone marrow iron stores, red cell protoporphyrin level and serum levels of transferring receptor protein are sophisticated markers, but primary evaluation and control are the first basic need to be addressed in developing countries.The analysis and evaluation establishes the fact that the iron levels are below satisfactory levels and proper care should be taken for restoration of human health in the developing countries.

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AN EXPLORATORY STUDY OF PREVALING KNOWLEDGE, ATTITUDE AND PRACTICE OF HUSBAND IN REGARDS TO FACTORS AFFETING IN SUPPORTING ACTIVITES DURING PREGNANACY, DELIVERY AND POST-PARTUM PERIODS.

Bhatta Bimala

Abstract:

Background: The study aimed to study knowledge, attitude and practice of husband and factors affecting in supporting activities during pregnancy, delivery and postpartum period at Khairahani VDC of Chitwan district. The general objective of the study was to identify husband's involvement in making safe pregnancy, delivery and postpartum period. Methods: A cross sectional, descriptive and non-experimental study design was conducted using quantitative methods. Sampling method was purposive and study population was father of fewer than one year age group children. Data was collected using structured questionnaire by interview method. Results: Majority of husbands had low knowledge about support during pregnancy, delivery and postpartum period while activities did for support was very negligible regardless of knowledge. Most of the husbands don't know about danger signs during pregnancy. Very low level of knowledge was found about birth preparedness, emergency obstetric conditions during delivery period. Husbands took decision regarding place of delivery in majority. Half of the respondent's don't know about complications during postpartum period. Education level was found to be non-supporting factor for knowledge of support during pregnancy. Education of husband increased the knowledge of birth preparedness during pregnancy. Family size has influence the support during postpartum period. There was no association between income of husband and support provided during delivery. Conclusion: The knowledge level of support was found to be low during pregnancy, delivery & postpartum period along with supporting activities. Similarly there was low knowledge of emergency obstetric condition; danger signs during pregnancy and post-partum period. The practice of birth preparedness was found to be unsatisfactory regardless of knowledge.

Key words: Knowledge, Attitude, Practice, Pregnancy and Delivery

Introduction:

Maternal mortality is leading cause of death among women of reproductive age in most developing countries. Pregnancy and childbirth is a physiological process but complications related to pregnancy and childbirth are among leading cause of morbidity and mortality of women in many parts of developing world. Situation of Nepal is even worse. It has one of the highest maternal mortality rates in world

i.e. 281/100,000 live births[1,2]. Chance of dying is 1 in 32 in Nepal[3,4]. Major causes are preventable.

These causes are related with low status of women, low education level, low nutrition, health services (accessible, affordable & availability), low control over economic, no control in decision making regarding health & life. Maternal death is multifactor complex interaction of several factors (social, medical, obstetric & health service)[5,6]. Women's low status, poor nutrition, high level of infection at every stage of life , delay in recognizing seriousness to require medical attentions, delay in seeking treatment and arranging transport to a medical facility if necessary are some of underlying cause cultural practices are also prohibiting such supports to mother. SM is one of the most focused & prioritized program of government more concerned to women because it was thought that women were the one to become pregnant ,they should be encouraged to protect their own health .Thus efforts to ensure SM have failed to recognize important role that men can play in saving women's lives. Men are generally the forgotten reproductive health care clients, and their involvement often stops at the clinic door[8]. Factors that contribute to preventable causes of maternal mortality are delay in recognizing when a sign is serious enough to require medical attention, delay in seeking treatment for complications, including contacting medical personnel & arranging transport to a medical facility. Men can play key role in preventing these delays causing maternal deaths.

In Nepalese society, tradition continues to play an important role in perpetuating rigid gender roles which relegate women to subordinate status in society. The inequalities that women face them more likely suffer from poor health, poverty & violence[5] . Rigid gender roles can also prevent men from being actively involved in issues related to pregnancy leading consequences. In health facility, RH including SM is more oriented to female, not prepared to provide especial RH needs of male, staff not trained how to deal with men, lack counseling parts, male not being comfortable to visit health facility. When they accompany their partner to a facility, male may find no programmes encouraging or allowing them to participate in reproductive-health decision making with their partner, or to address their own reproductive and sexual healthcare needs. Thus there is lacking in information delivery system also. Health-service providers need make concerted efforts to reach men both in communities and in clinics, and to offer services that address both men's and women's health care needs, either alone or as partners.

Materials and Method:

Objective of the study

The objective of the study was **t**o identify husband's involvement in making safe pregnancy, delivery & childbirth at Kahirahani VDC of Chitwan district.

The study was based on descriptive & qualitative type of study.The study design was non experimental, cross-sectional design. The study population of the study was husbands having children below one year old.The study was conducted in Tharu community of Chitwan district.The sampling technique was purposive type. There were 142 participants Interviewed by structured interview schedule for data collection.Data was collected by using the

structured questionnaire. Those participants who were unwilling & refuse to participate was excluded from the study.Verbal consent was taken prior to the interview to the respondent. The questionnaire was pretested before data collection in same community but in different ward & necessary modifications was incorporated in the questionnaire for the validity. All the data was cross checked & edited on the same day of data collection.Consistency was maintained in data collection.

Results:

Knowledge about support during pregnancy

Most of respondent told that support such as accompany during ANC followed by help in HH, bringing extra nutritious food during pregnancy were the support that were to be provided during pregnancy.

Table 1 Knowledge about support during pregnancy

Know about support	Number	Percent
Accompany during ANC visit	67	42.9
Help in household work	42	26.9
Recognize danger signs	1	0.6
Give transportation cost	1	0.6
Bring extra nutritious food	37	23.7
Save fund for emergency	1	0.6
Ensure getting enough rest	1	0.6
Others	6	3.8
Total responses	156	100

More than half of respondents had heard about support to be provided during pregnancy. Accompany during ANC followed by help in HH, bringing extra nutritious food during pregnancy were the main support that were known by respondent during pregnancy. This referred that respondents knew about help to be provided. Half of respondent had heard about birth preparedness during pregnancy. It was found to be low in educated one also. It may be due to negligence and less seriousness of the problem. Saving fund, 31% followed by managing delivery kit & 10% arranging transportation facility were known by respondent for birth preparedness

.Knowledge about support during post-partum difficulties:

Only 27% had heard about EOC while majority. Obstructed labour followed by heavy bleeding as known as major symptoms of EOC. About half of respondents don't know about complications that may arise during PPP. This indicates low knowledge level of husband regarding danger signs or complications that may occur during postpartum period. This may be one of the main factors towards the delay in the health service. In addition to educational level wasn't found to be supporting factor for the awareness of the complications and the danger signs. From above findings it can be concluded that low level of knowledge of husband could be seen regarding the support to be provided during pregnancy, delivery &post partum period. Education level was not associated with knowledge of husband regarding support to be provided during pregnancy, delivery &post partum period. This may be due to cultural barrier along with low status of women due to gender inequality. The respondents who had heard about support, 42.4 % respond to bring extra nutritious food followed by help in HH work & take baby for some time.

Table 2: Knowledge about support during PPP

Knowledge about support	Number	Percent
Bring extra nutritious food	64	42.4
Help in HH work	38	25.2
Take mother & baby for check up	10	6.6
Ensure mother has enough rest	7	4.6
Take baby for sometime	19	12.6
Bring medicines	6	4.0
Others	7	4.6
Total responses	151	100

Despite the above result most of respondents had favorable attitude for support during pregnancy, delivery, & PPP period. This indicates that husband's were eager for the support but lack in practice, which might be due to the different gender norms inherent in that culture. Low practice for birth preparedness was seen even in those who have got knowledge about it. There was better support by

husband in nuclear family than in joint family size.

Income level didn't affect support provided by husband during delivery period. Away from home for employment for employment were main causes for not providing support during pregnancy, delivery & PPP. Accompanying their wives during ANC visit followed by helping in HH activities & in bringing extra nutritious food was the major supporting activities during pregnancy. Majority of respondents don't know respondents i.e 54.5 % don't know about the danger signs during pregnancy. Most of the respondent had taken their wives to hospital when they had danger signs during pregnancy while 9.5 % go to dhami/jhakri& 9.5% do nothing during such conditions. Saving fund followed by managing delivery kit for delivery were main activities for birth preparedness.

Major supporting activities did by respondents were making transportation facility available, choosing place of delivery presence during delivery period. 77.8 % had visited health facility while 11.1 % had contact health personnel during such conditions and 11.1% did nothing. Hospital was main place of delivery followed by home delivery i.e 27.5 %.Husbands were the main decision makers for place of delivery followed by other family members. Wives had only 15% decision for place of delivery. Majority had supported by providing extra nutritious food, helping in HH work & taking baby for some time during PPP. There was equality in visiting health facility & contacting health personnel followed by going to dhami/jhakri. While 11.1 % did nothing during such condition.

Discussion:

The study was carried out to find out husband's involvement in making safe pregnancy, delivery & post-partum period. There were all together 142 respondents were interviewed from Tharu community in whole VDC. In an attempt to find out the knowledge, attitude status of husband, describe practices of husband's support to their wives and determine factors that affect husband's support in making safe pregnancy & child birth, data on respected variables were collected and analyzed. Most of the respondents were of age group 21-30 with similar to that of wives age group. 51.4% of the respondent had

High number of wives was educated up to secondary followed by literate category of education**.** Most of the respondent had low level of income which is less than RS 5000 per month. Most of the respondent working as labor followed by agriculture. Joint family was dominant over nuclear. Father in-law followed by husband & mother in law had more decisions on expenses, which reflects that women have no control over the expenses and deciding for their own health issues the study is similar which was done by Engender Health, Men as Partners in reproductive Health in Nepal[2].

More than half of respondents had heard about support to be provided during pregnancy. Accompany during ANC followed by help in HH, bringing extra nutritious food during pregnancy were the main support that were known by respondent during pregnancy. This referred that respondents knew about help to be provided. Half of respondent had

heard about birth preparedness during pregnancy. It was found to be low in educated one also. It may be due to negligence and less seriousness of the problem. Saving fund, 31% followed by managing delivery kit & 10% arranging transportation facility were known by respondent for birth preparedness which was similar the study done by Valley research group, Men's attitude in reproductive and sexual health. Kathmandu, submitted to UNFPA, Nepal[8].

From above findings it can be concluded that low level of knowledge of husband could be seen regarding the support to be provided during pregnancy, delivery &post partum period. Education level was not associated with knowledge of husband regarding support to be provided during pregnancy, delivery &post partum period. This may be due to cultural barrier along with low status of women due to gender inequality. This finding was supported by study conducted by Manandher and Wedneya about obstetric health in 2000[8,9].

Away from home for employment for employment were main causes for not providing support during pregnancy, delivery & PPP. Accompanying their wives during ANC visit followed by helping in HH activities & in bringing extra nutritious food was the major supporting activities during pregnancy[6,7]. Majority of respondents don't know respondents i.e 54.5 % don't know about the danger signs during pregnancy. Most of the respondent had taken their wives to hospital when they had danger signs during pregnancy while 9.5 % go to dhami/jhakri& 9.5% do nothing during such conditions. Saving fund followed by managing delivery kit for delivery were main activities for birth preparedness. Major supporting activities did by respondents were making transportation facility available, choosing place of delivery presence during delivery period. 77.8 % had visited health facility while 11.1 % had contact health personnel during such conditions and 11.1% did nothing. Hospital was main place of delivery followed by home delivery i.e 27.5 %.Husbands were the main decision makers for place of delivery followed by other family members. Wives had only 15% decision for place of delivery. Majority had supported by providing extra nutritious food, helping in HH work & taking baby for some time during PPP.

Regarding hypothesis knowledge about birth preparedness will differ with knowledge level of husband about support to be provided during pregnancy. The result had shown significant association between education level & birth preparedness was similar to the study done by Nepal demographic and health survey 2001. Calverton, Maryland, USA 2002[5]. Support activities of husband to wife will differ with size of family during post-partum period. High support was provided more in nuclear family rather than in joint family, thus there was some influence of family size in supporting activities by husband during PPP. Support provided by husband will differ with income of husband during delivery. Thus there was no such association of income level & support provided during delivery period. There is relation between education level & knowledge of support provided by husband during pregnancy. There was no relation between educational status & knowledge of support during pregnancy period.

Conclusion

There was low level of knowledge of husband regarding support to be provided during pregnancy, delivery & post-partum period. There was low knowledge of husband regarding emergency obstetric conditions during delivery period. It is found to be low in educated one also. There was low knowledge level of husband regarding danger signs or complications that may occur during postpartum period. And educational level doesn't affect it. There was low practice for birth preparedness in those also who have got knowledge about it. There was no relation between education level with knowledge of husband regarding support to be provided during pregnancy, delivery & post-partum period. There was better support by husband in nuclear family than in joint family size. Support provided by husband was not affected by the income level during delivery period. Educational level of husband is associated with knowledge about birth preparedness during pregnancy period.

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UTILIZATION OF MATERNAL HEALTH CARE SERVICES IN BELBARI VDC OF ESTERN REGION OF NEPAL

Bhandari Buna, Pokhrel Baburam, Bhatta Bimala, Karn Rajib, Pokherl Ava and Jha Nilambar

Abstract:

Background: Appropriate utilization of maternal health care services is very important to reduce the maternal morbidity and mortality rate in the country and healthful practices while caring mother is needed to improve the health condition of both mother and child. Objectives: Main objectives of this study is to assess the utilization of Maternal health care services and know the cultural practices about care of mother and children of under one year of children. Methodology: Descriptive cross sectional study was conducted among 248 mothers of less than one year children on Belbari VDC of Morang district. Data was collected by using quantitative (house hold survey) and qualitative (focus group discussions and key informant interview) methods. Results: Among 248 mothers, 84% utilized the antenatal care services, 91% received TT vaccine during pregnancy. Most of them 80% had done delivery in health institutions. Conclusion: Based on proposed objectives of study, Utilization of maternal health care services should be encouraged in Belbari VDC of Morang District and healthful practices should be reinforced in areas where corrections are needed.

Key words: Utilization, Mortality, Antenatal, Hospital, Children

Introduction

Maternal mortality ratio is one of the most important indicators of health. On the other
hand, it is a crucial health indicator of population. The health care that a woman receives during pregnancy, at the time of delivery and soon after delivery is important for the survival and well being of both the mother and the child.[1]Global evidence shows that all pregnancies are at risk, and complications during pregnancy, delivery and the postnatal period are difficult to predict.[2]Every year 529,000 maternal deaths occur worldwide as a result of pregnancy and pregnancy related complications. Among these deaths, 99% of deaths occur in developing countries.[3]Maternal mortality in South-East Asia accounts for about 40% of global deaths. A large majority of women, particularly the poor and the marginalized, do not have easy access to such life-saving technologies.[4]

Maternal mortality of Nepal in 2006 was 281 per 100000 live births which are still high relative to developed countries.[1]The coverage of antenatal care (ANC), delivery care and postnatal care (PNC) is important maternal health indicators. This study aims to provide scenario of utilization and practices of maternal and child health care and give some new additional information for development of new strategy on maternal and child health services to reduce maternal and infant mortality in the country.

Methodology:

Descriptive cross sectional study was conducted among mothers of under 1 yrs age of children of Belbari VDC of Morang district in Eastern Nepal. To collect the data quantitative (house hold survey) and qualitative (Focus group discussions and key informant interview) methods were undertaken for finding out the service utilization and practices. The structured and semi structured questionnaire and focus group discussion guidelines were used to collect information from community people. Key informant interview guideline was used to get information from health workers. Face to face interview with mothers and one focus group discussion (FGD) in each ward was conducted to collect the information needed for the study. Collected data was checked, rechecked and edited at the end of data collection and coding and categorization was done. Data entry and analysis was done using Microsoft Excel and SPSS 11.5 version. Verbal consent was taken from the participants to participate in the study. Respondents were acknowledged for their participation in the study.

Results:

Table 1 shows the socio demographic variables of respondents. Most of them (90%) between the age of 20 to 35 yrs, majority 80% Hindu and more than half 53% were housewife followed by farmer (24%) and More than half (67%) were literate Among 248 women who had at least one child below one year, 208 (83.87%) had visited health facilities for antenatal check up (Fig 1). Among 208 mothers of doing antenatal checkup during pregnancy, 108 (52%) visited government hospital and 100 (48%) visited private hospital. Moreover 198 (91%) received TT vaccine whereas 10 (9%) not received. Similarly 181(87%) taken twice and 27(13%) taken only once TT vaccine. Among 248, it was found 198 (80%) had avoided some foods during pregnancy whereas remaining 50 (20%) had not. It was found that 134 (54%) had taken special food such as meat, egg, fruits, curd etc daily whereas remaining 114(46%) had not. Fig 2 shows the place of delivery, among them 198 (80%) had institutional delivery whereas 50(20%) home delivery with the help of their family, relatives, health workers etc. There were total 248 live birth within one year, which comprises 116 for male baby and 132 female.

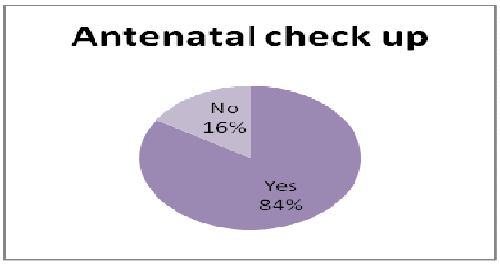

Fig 1: Distrtibution of utilization of Antenatal services

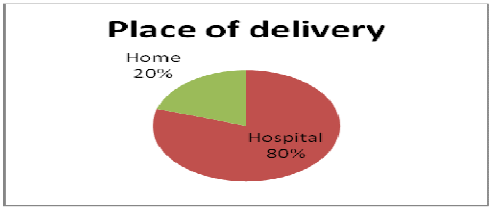

Fig 2: Distrtibution of place of delivery of respondents

Table 1: Distribution of Socio demographic variables of respondents (N=248)

Characteristics	Categories	No	%
Age in years	< 20	10	4.03
	20 – 35	223	89.9
	>35	15	6.04
Ethnicity	Rai/ Gurung	52	21
	Chettri	42	17
	Brahmin	31	12.6
	Dhimal	13	5.5
	Newar	10	3.6
	Others	100	40.2
Religion	Hindu	198	80
	Kirat	22	09
	Buddhist	12	05
	Others	15	06
Education Status	Literate	166	67
	Illiterate	82	33
Educational level	S.L.C Above	54	32
	Below S.L.C	194	78
Marital status	Married	248	100
	Unmarried	0	0
Main occupation	Farmer	60	24
	Service holder	12	5
	Business	20	8
	Labourer	25	10
	Housewife	131	53

Regarding the child rearing practices, it was found that among the total under one children, (92.7%) 230 child got colostrums feeding and rest (7.3%) 18 children were devoid of it. Reasons were 55% was due to lack of secretion of milk and rest 45% due to misconception. Forty two percent children were given supplementary milk feed and to rest of child not given.

According to our survey about 100 (40%) children got solid food before six months and rest 60% got after six months of age.

Discussion:

Maternal and child mortality is one of the most important indicators of health. Among health indicators, maternal mortality reflects great disparities between rich and poor. So, the health

care that a woman receives during pregnancy, at the time of delivery and soon after delivery is important for the survival and well being of both the mother and child. Thus cross-sectional study was carried out to assess the factors associated with the utilization and practices of maternal and child health services among women of under one children. The present study indicates high rate of utilization of antenatal care services by women in the study area. It shows that 84% of women had made at least one antenatal visit during their last pregnancy. This is slightly higher than that of national average reported by Department of Health Services (67%) and National Demographic Health Survey 2006 (74%). This study found that twice more utilization of ANC service than reported by National Demographic Health Survey (NDHS) 2006 in Terai (43%). The high utilization of ANC might be due to the effective service delivery in the study area.[1,2,4].

The ANC utilization is lower than the study done in Karnataka, India (92.3%) by Metgud C S et al and other study in India (89%) by Singh P et al.[5,6] The findings of this study is similar to other studies done in Punjab by Abrol A et al and rural north India by Singh A et al.[5,7]The ANC utilization of this study is much higher than the study done in rural Bangladesh (59%) by Rahman Md et al and in Aligarh India by Das R et al. [8,9.]

The utilization of ANC in this study was three times more higher than the study conducted in terai district of Nepal (27%) by Jha N et al.[10] The present study shows that the most of the women (91%) had taken TT injection during their last pregnancy which is nearest to previously reported in terai area of Nepal by NDHS 2006 (85.9%). It is slightly higher than that of Nepal (78%) as reported by NDHS 2006. Among TT users, 87% women had taken two doses of TT injection which is slightly more than the NDHS 2006 findings in Terai area (75%). But it is very high than that of Nepal as reported by Department of Health Service (49.5%) and in terai district of Nepal (43.7%) by Jha N et al. It is almost similar to the reported coverage of the Sisautiya health post (90.7%).[1,2,4,10,11] .

The study done in rural areas of India by Hadi A et al showed that 91.7% of women had taken TT injection which is similar to study findings.[12]The present study shows that the most of the deliveries (80%) had taken place in the hospital and 20% of deliveries were conducted in the hospital. Institutional deliveries are higher than that of Nepal reported by DHS (15.3%) and NDHS 2006 (17%) in Terai. The institutional delivery is higher than that of previously in urban slum of New Delhi (68.2%) by Agrawal P et al and in North India (41.7%) by Singh A et al.[13,7.]

High institutional deliveries in this study might be due to the availability of institutional staff at health facility and the others might be financial and transportation facilities at the study area. The majority of participants in focus group discussion were not taken supplementary food during their last pregnancy. Some women believed that the supplementary food during pregnancy increases the size and weight of fetus and leads to difficulty labor. The food like milk was avoided during the pregnancy though it is rich source of vitamins and minerals. It was believed that the milk causes *Pithari* disease (white patches in the skin) in the new born. There was good practices of colostrum feeding apart from these cow milk, goat milk, honey,

water was also given for first 2 to 3 days because there was a belief that the quantity of milk is not sufficient for first 2 to 3 days. However, WHO guidelines recommended that babies be exclusively breastfed as many times as demanded for first six months of their life.[14]

Mothers' were provided with foods like preparation of ginger and turmeric might be good practice in the community. Awareness program should be conducted in the community to change or minimize the traditional harmful practices.

Conclusion:

Though the utilization of maternal health care services like antenatal and delivery services are good in Belbari VDC but along with that utilization of post natal services should be put emphasis on. Feeding of colostrums to all newborn babies immediately after birth within one hour should be emphasized. Similarly healthful practices should give emphasis to and harmful practices like not taking proper nutritious food during pregnancy should be discouraged. Proper and timely weaning practices should be adopted.

Acknowledgement:

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COMPARISON OF TOLERABILITY BETWEEN QUETIAPINE AND HALOPERIDOL IN SCHIZOPHRENIA

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Abstract:

Schizophrenia is a serious, disabling, often lifetime condition, which can produce severe functional impairment in patients. The life time morbidity risk for schizophrenia is estimated to be 1% and account for 2.8% of the total global YLDs. The World Health Organization Assessment Instrument for Mental Health Systems report of 2006 done in Nepal states in Nepal states that 12% of the patients are diagnosed as schizophrenia in out-patient mental facilities, 14% in community based psychiatry inpatient units and 34 % in mental hospital . Atypical antipsychotics are the first line agents recommended for the treatment of schizophrenia considering better efficacy at least in the negative symptoms and better side-effect profile compared with typical antipsychotic. Haloperidol has been used as a standard comparator in numerous trials and new drugs have been compared to it to establish their efficacy, and safety profile. As the authors could not find out any such study which had compared the safety profile of quetipine against conventional antipsychotic, hence this present study is purposed to carry as an attempt to address this issue among Nepalease population.

Key words: quetiapine, haloperidol, Tolerability, Schizophrenia.

Introduction:

In the modern pharmacology, two broad groups of antipsychotics are recognized-conventional antipsychotics (CAP) and atypical antipsychotics (AAP). Before any antipsychotic can be accepted as useful, its relative merits in comparison with the existing drugs must be carefully accessed.
There are various studies which provide evidence that Quetiapine is as effective as conventional antipsychotic agents in treating positive symptoms and more effective in the treatment of negative symptoms of schizophrenia. Quetiapine is found to be more tolerable in most trials and has led to better outcomes in terms of better rehabilitation, drop in in-patients and crisis utilization, increased vocational training, increased compliance and medication visits, decreased hospitalization, and with overall decrease in indirect health costs which

offsets the direct acquisition costs leading to stabilization at a lower level of health care expenditure[1,2].

Tolerability is a key factor in treatment adherence, which is important to the long term outcome for patients with schizophrenia. From a pharmacoecomomic perspective, non adherence is also costly leading to increase in external service costs and a requirement for more in patient services for patients who fail to adhere. The side effect profile is equally important as the efficacy, because the short term and long term outcomes of the drug might make the patient worse than the disease[2,3,4].

Metods and Methodology:

This study sought to compare the side-effects of quetiapine and haloperidol in schizophrenia patients. The study enrolled 45 patients both from OPD and inpatient of Psychiatry department TUTH between Jan and July 2009. Those meeting the ICD-10 DCR criteria for schizophrenia were randomly assigned to quetiapine (600-800mg/day) and haloperidol (15-20 mg/day) after informed consent. Patients were either drug naïve or washout period of one week was given. Patients were evaluated at 0,7,14, 28 and 42 days of intervention using UKU side-effect rating scale. Those patients developing extra pyramidal side- effects were treated with Trihexyphenidy and Promethazine and benzodiazepines were used as needed to control aggression and sleep disturbances.

Results:

Table I: Psychic side-effects observed in both the groups during the study group

Adverse Effect	Haloperidol		Quetiapine		T- test
Psychic	Present	Absent	Present	Absent	
Concentration difficulties	2(11.1%)	16(88.9%)	(5%)	19(95%)	
Asthenia	10(55.6%)	8(44.4%)	(15%)	17(85%)	P=0.485
Sleeping	4(22.2%)	14(77.8%)	(45%)	11(55%)	P=0.009*
Failing Memory	0(0%)	18(100%)	0(0%)	20(100%)	NS
Depression	0(0%)	18(100%)	0(0%)	0(100%)	NS
Tension	3(16.7%)	15(83.3%)	0(0%)	20(100%)	P=0.057
Increased duration of sleep	1(5.6%)	17(94.4%)	(35%)	13(65%)	P=0.026*
Reduced duration of sleep	0(0%)	18(100%)	0(0%)	20(100%)	NS
Increased dream activity	0(0%)	18(100%)	0(0%)	0(100%)	NS
Emotional Indifference	0(0%)	18(100%)	0(0%)	20(100%)	NS

Table II: neurological side-effects observed in both the groups during the study

Adverse Effect	Haloperidol		Quetiapine		T- test
Neurological	Present	Absent	Present	Absent	
Dystonia	6(33.3%)	12(66.7%)	0(0%)	20(100%)	P=0.005*
Rigidity	13(72.2%)	5(27.8%)	0(0%)	20(100%)	P=0.000*
Hypokinesia	7(38.9%)	11(61.1%)	1(5%)	19(95%)	P=0.011*
Hyperkinesias	0(0%)	18(100%)	0(0%)	20(100%)	NS
Tremor	0(66.7%)	6(33.3%)	1(5%)	19(95%)	P=0.000*
Akathisia	10(55.6%)	8(44.4%)	0(0%)	20(100%)	P=0.000*
Epileptic Seizures	0(0%)	18(100%)	0(0%)	20(100%)	NS
Paraesthesia	2(11.1%)	16(88.9%)	1(5%)	19(95%)	P=0.485

Table III: Autonomic side- effects observed in both the groups during the study

Adverse Effect	Haloperidol		Quetiapine		T- test
Autonomic	Present	Absent	Present	Absent	
Accommodation Disturbance	2(11.1%)	16(88.9%)	1(5%)	19(95%)	P=0.005*
Increased Salivation	6(33.3%)	12(66.7%)	0(0%)	20(100%)	P=0.453
Reduced Salivation	2(11.1%)	16(88.9%)	4(20%)	16(80%)	NS
Nausea/Vomiting	0(0%)	18(100%)	0(0%)	20(100%)	NS
Diarrhea	0(0%)	18(100%)	0(0%)	20(100%)	P=0.087
Constipation	0(0%)	18(100%)	3(15%)	17(185%)	NS
Micturition Disturbance	0(0%)	18(100%)	0(0%)	20(100%)	NS
Polyuria / Polydipsia	0(0%)	18(100%)	0(0%)	20(100%)	P=0.485
Orthostatic Dizziness	6(33.3%)	12(66.7%)	15(75%)	5(25%)	P=0.010*
Palpitations	2(11.1%)	16(88.9%)	2(10%)	18(90%)	P=0.911
Increased Tendency to Sweating	0(0%)	18(100%)	1(5%)	19(95%)	P=0.336

Neurological side effects

In the present study, the category of neurological side effects clearly shows the preponderance of haloperidol over quetiapine. Parkinsonian side effects are significantly greater in the haloperidol group. The most predominant difference was in rigidity, which is 72.2 % in haloperidol, while none of the patients receiving quetiapine showed rigidity. (Chi-square test gave P-0.000). Dystonia was observed with 6(33.3%) of the patients receiving haloperidol, while not observed in quetiapine group. (Chi- square test, p=0.005) . Tremor was seen in 12(66.7%) in haloperidol, while only 1(5%) patient on quetiapine showed tremor. (Chi-square test p=0.000). Akathisia was seen in 10(55.6%) in haloperidol group while not observed in quetiapine, (Chi- square test p= 0.000) Hypokinesia was seen in haloperidol

7(38.9%), while only one of the patient 1(5%) receiving quetiapine showed Hypokinesia. (Chi- square test p=0.011).Hyperkinesia not seen in any of the group. Epiletic seizures were not seen. Paraesthesia occurred in 2(11.1%) and 1(5%) in haloperidol and quetiapine but not found to be significant.

Psychiatric side effects

In this category, Asthenia was seen mostly in haloperidol 10(55.6%) and only in 3(15%) in the patients receiving quetiapine was statistically significant as, p= 0.009. Sleepiness was seen in 4(22.2%) and 9(45%) of the patients receiving haloperidol and quetiapine respectively. Increased duration of sleep was seen more in quetiapine group 7(35%) than 1(5.6%) in haloperidol, which was statistically significant, (*p=0.026). Failing memory was not seen in either group. Depression was not seen in either group. Tension was seen in 3(16.7%) in the haloperidol group while not appreciated in quetiapine group. Reduced duration of sleep was not observed with any of the groups. No increased dream activity or emotional indifference was seen in either group.

Autonomic side effects

In this category-the most troublesome side effect in quetiapine group emerged to be orthostatic dizziness. Orthostatic dizziness was seen in 6(33.3%) and 15(75%) of the patients receiving haloperidol and quetiapine respectively, which was statistically significant p=0.01. Increase salivation was not observed with quetiapine with quetiapine while with haloperidol 6(33.3%) had increased salivation (chi- square-p=0.005) which was significant. Reduced salivation was seen in 2(11.1%) and 4(20%) of the patients receiving haloperidol and quetiapine .Accommodation distruance was seen in 2(11.1%) of the patients receiving haloperidol, and 1(5%) receiving quetiapine. 3(15%) receiving quetiapine and none receiving haloperidol complained of constipation. Palpitation was complained by 2(11.1%) and 2(10%) among the patients receiving haloperidol and quetiapine respectively. Increased tendency to sweating was noticed. In quetiapine grouping one patient 1(5%) while not observed in haloperidol group.. None of the patients receiving haloperidol or quetiapine had nausea. Diarrhea was not seen in either group. Polyuria was not complained of in either group.

Discussion:

In the treatment with antipsychotic molecules, the side effect profile is equally important as the efficacy, because the short term and long term outcomes of the drug might make the patient worse than the disease itself Amongst other things the neurological side effects are most important for the patient to continue their medicines[1,5,6].

In the present study the catgory of neurological of psychic and neurological and autonomic side effects clearly show the preponderance of haloperidol to quetiapine in almost all the side effects, except for the ortostatic dizziness, constipation, reduced salivation, asthenia, concentration difficulties, and increased duration of sleep. This result is almost in consistent with the findings suggested by Sacchetti et al, Mullen et al, Cupillari, Kristina and Carlsson, and and Marder and Meibach[,6,7,8,9].

Parkinsonian side effects are significantly greater in the haloperidol group. The most important difference was in dystonia, and rigidity, followed by tremor. Though there is not siginificant statistical differences,

haloperidol induced more hyperkinesia and epileptic seizures than quetiapine.

Since dystonia is extremely disturbing for the patients, this side effect is one of the major drawback in conventional antipsychotic treatment and reason for non-compliance[1,2,5].

Haloperidol also induced more akathisia, which is more difficult to endure than any of the symptoms for which the patient was originally treated[5,6]. There was also a remarkable consistency in the results of EPS and the use of antiparkinsonian medication. These results are consistent with many other trials.

Conclusion and Summary:

Quetiapine has a better tolerability profile than haloperidol. In haloperidol majority of side effects were severe mostly neurological, such as Rigidity dystonia, tremor, akathisia, hypokinesia, asthenia, and increased salivation, while in quetiapine major side effects noticed were orthostatic dizziness, increased duration of sleep, most of side effects were mild to moderate in intensity. The adjunctive use of anti-parkinsonian medication is lesser in quetiapine than in haloperidol. Also, the better and quicker action of quetiapine on negative ansdd cognitive symptoms may lead to better improvement in social functioning and improved treatment compliance compared to haloperidol.

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TEMPORAL LOBE EPILEPSY PRESENTING WITH DELUSION OF LOVE

Tulachan Dibya, Yadav Rajesh and Gurung Bindu

Abstract:

Complex partial seizures are characterized by altered awareness of the self and the environment. Consciousness is retained unless secondary generalization occurs. Apart from the area and automatism patients may also experience odd disturbances of thought, emotion, deza vu, Jamai's vu. depersonalization, derealization or even vivid hallucination of past experience (experiential phenomena). Here we report an adolescent lady presenting with non-convulsive status epileptics manifesting in the form of mood disorder with grandiose delusions of increased ability and identity as well as erotomania.

Radioimaging and EEG revealed an epileptic focus originating from the parieto-temporal region. The case report cautions against an organic epileptic seizure that might be mistaken for dissociative, pseudodmentia, paranoid psychosis or even schizophrenia.

Key words: Complex partial seizure, erotomania, grandiose delusion, mental state.

Introduction:

In 1976 Hughlings jacksons wrote, "an epileptic discharge is defined as an occasional, sudden, excessive, rapid and localized disorder of some part of the cerebral hemisphere[3] . The definition has been modified by Saddok and writes, "Epileptic seizures are sudden involuntary behavioural events associated with either excessive or hypersynchromous electrical discharge in the brain"[2] .

The behavioural manifestations are most prominent in seizures of complex partial type which characterized by altered awareness of the self and the environment along with other features of mental faculty which includes consciousness, automatic activities, perception, consciousness, automatic activities, perception, cognition, thought memory, mood and psychomotor activity[1]. Among these temporal lobe seizures are not only the most common but also the most likely to be mistaken for psychiatric disorder. It appears that mesial lobes are involved in integrating sensory input, memory and emotiona and in creating a sense of self Paroxysmal disturbance of the region is therefore most likely to result in disorders of particular interest to the psychiatrist[4] .

The Psychoses and mood disturbances associated with epilepsy are best divided into those related to seizure and those seen inter-ictally in patients with epilepsy. Less commonly an abnormal mental state may be the only sign of non-convulsive status epilepticus and the syndrome of epileptic pseudodemetia is increasingly recognized as reversible cause of cognitive decline[1].

Case Report

An adolescent girl of 19 years, who was a student, was admitted under the Department of Psychiatry and Mental Health in Nobel Medical College, Biratnagar for an acute illness of 17 days duration. She presented with multiple episodes of epileptic seizures associated with significant changes in behaviour, mental state and consequently the overall personality. It was insidious in onset but rapidly progressive over a period of 2 days. Her mood was persistently elated with increased psychomotor activity. Her excitement was so much that she could not stay in one place and had to keep on wondering around or keep on talking with friends on matters of self-importance.

Her content would have grandiose and self-importance ideas of increased ability and identity. She would express that she was very beautiful and intelligent and had completed her post-graduated studies which was obviously not true and accused her friends for being jealous about her, tried to harm her to degrade her.

Another specific content of her thought was delusion of secret love. She was having delusion of being loved by a student in the same university as hers. Though there had been no discussion on this issue with the other person on this matter, she came to know about this when she had lost two photographs, which had been secretly taken by the purported lover.

Apart from this she also claims that four other persons including a campus teacher was secrately in love with her and three of her friends were jealous about this.
On cross checking the information given by the patient the characters existed but the story as a whole was confabulated and consistent with the phenomenological rubric "Pseudologia fantastica".

Laboratory investigations like Complete Blood Count, Liver Function Test, Rental Function test, Thyroid Function Tests (T3m T5, TSH) and ECG were with in normal limits.

The EEG showed epileptic discharges from the temporal region and CAT SCAN revealed two circumscribed 0.5 cm circular ring enhancing sessions in the left parietotemporal lobes.

The final diagnosis made was: Localization related epilepsy due to ring enchancing lesions (Neurocysticercosis) in non-convulsive status epilepticus of complex partial type.

Treatment was started with Sodium Valporate 900 mg/day and the subject had shown significant improvement with gradual amelioration of symptoms.

Discussion:

Epilepsy need not always present with the typical aura, motor, sensory and autonomic manifestations and focal neurological signs. And this is so much more with temporal love epilepsy. It is consistent with our finding and that of the initial study of epilepsy and psychosis by Slater et al.[7] , where they reported most of the patients suffering form foci of temporal lobe origin.

More over our finding further follows the 1969 study of Flor-Henry[8] who produced the evidence in favour of special regional association by demonstrating that among temporal lobe epileptics those with psychotic and schizophrenia like symptoms were strongly associated with foci in the dominant rather than in the non-dominant lobe. This important finding had been further confirmed by Perez et al[5] and Taylor[6].

So whenever a person presents with and acute change in behaviour, mood disorder, delusions and memory impairment with even a subtle changes in the premorid personality

one should be aware of aware of organic disease of the brain that might be predisposing and it should be followed by necessary investigations which is rational and cost effective. Sometimes an abnormal mental state may be the only sign of non-diagnosis is easily overlooked.

Non-convulsive status may take the form of a prolonged seizure, or a rapid succession of brief seizures. In such cases, a protracted period of automatic behaviour may be mistaken for a dissociative fugue or other psychiatric disorders[1].

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CONGENITAL GENU RECURVATUM WITH DISLOCATION OF KNEE: A CASE REPORT

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Abstract:

A baby girl was born with severe deformity of left knee. Clinically and radiologically she was diagnosed as congenital dislocation of left knee. Gentle manipulation followed by above knee POP slab corrected the deformity in three weeks. A follow up at the age of 6 months showed normal position and range of motion of the knee. We are reporting this case for its rarity. Early recognition requires simple intervention only.

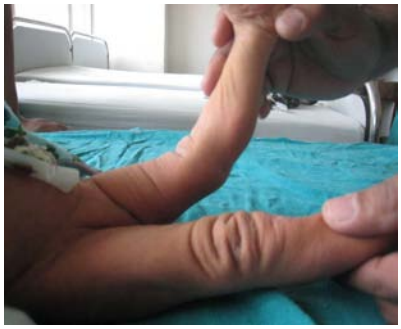
Key words: congenital genu recurvatum, knee dislocation, hyperextension of knee

Introduction:

Congenital genu recurvatum is a rare malformation characterized by hyperextension of the knee and marked limitation of flexion[1]. We report a case of a newborn baby with hyperextension of both knee joints and anterior dislocation of tibia on femur.

Case report

A full term baby girl born by normal vaginal delivery, presented with extreme hyperextension of left knee (fig.1a). Both knees were straightened passively. There were no associated anomalies. Radiograph revealed anterior dislocation of tibia on femur (fig.1b). Both hips were normal. Gentle manipulation followed by above knee POP slab was used on the fourth day of life. The slab was removed in three weeks. In three weeks, the knee adopted a normal shape. The slab was discontinued and the mother was advised to continue passive stretching. A follow up at the age of three and six month showed normal position of the knee.



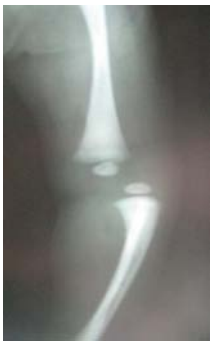


Fig.1a. Congenital genu recurvatum of left knee; Fig.1b. radiograph of the knee

Discussion:

Congenital genu recurvatum is an uncommon condition that can present in three different forms, namely, congenital hyperextension, congenital hyperextension with anterior subluxation of the tibia on the femur, and congenital hyperextension with anterior dislocation of the knee joint on the tibia (fig.2). Hyperextension is frequently present in normal knees of a breech baby[2].

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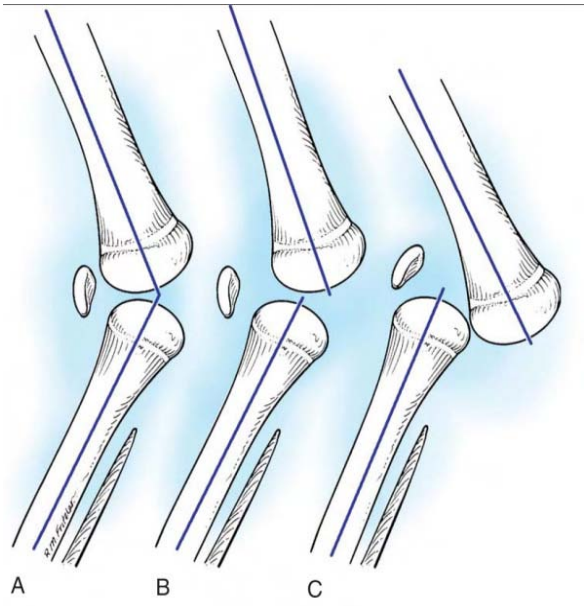
The position in utero may influence the development of dislocation of the knees when the fetus is in breech position. Congenital dislocation of the knee, first described in 1922, is a rare condition, and is sometimes associated with other congenital malformations[3,4]. Diagnosis is made by physical findings of hyperextension and anterior displacement of the tibia. A radiograph confirms the diagnosis of dislocation



1. Fig.2. A, congenital hyperextension B, congenital subluxation C, congenital dislocation of knee (extraced from: Canale ST, Beaty JH. Campbell's Operative Orthopaedics, 11th ed, volume II)

The treatment depends on the severity of the dislocation and the age of the patient. We agree with the other authors that non-operative treatment is usually successful, if commenced at birth. Early manipulation, combined with splinting and casting is the mainstay of treatment in dislocation. Late presentation may require surgical release of the anterior structures of knee[3,4]. We achieved full correction within a short period of time. The key to success was early gentle manipulation and reduction followed by above knee POP slab. Emphasis should be laid on the immediate recognition and treatment of the condition.

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