Molar Pregnancy-Clinical Trends at Maternity Hospital

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Abstract
Objective: To describe the clinical trends of hydatidiform mole in Maternity Hospital, Thapathali, Kathmandu.

Methods: Retrospective study of 86 patients admitted for primary management of Hydatidiform mole during March 2004-April 2005 was performed and clinical trends were identified.

Results: During the study period 25,105 live births occurred and a total of 86 patients were admitted for primary management of molar pregnancy. The incidence was 1:291 live births. Only 2.3% partial mole was identified out of 86 cases. Among 86 cases 34.8% in first & 52% in second trimester of pregnancy presented with vaginal bleeding which was the most common symptom. USG remained the main tool for diagnosis but few cases diagnosed as missed abortion turned out to be hydatidiform mole on histopathology after evacuation. 42% patients were between the age group 20-24 years & 41% comprises of parity one and two. 47% presented with excessive uterine size and majority of them were treated with suction evacuation. Majority of them had Blood group O & A positive. Persistent gestational trophoblastic tumour developed in six (6.9%) patients & choriocarcinoma in three (3.4%) patients.

Conclusion: Use of USG in early pregnancy plays a great role in diagnosing Hydatidiform mole on time & guides towards the needful management.

Key Words
Choriocarcinoma, Hydatidiform mole, Persistent gestational Trophoblastic tumour, ultrasonography.

Introduction
Hydatidiform mole is a type of gestational trophoblastic disease (GTD). About 80% of hydatidiform mole are not cancerous and disappear spontaneously. About 15-20% invade surrounding tissue and tend to persist. Of these invasive moles, 2-3% become cancerous and spread throughout the body and then it is termed as choriocarcinoma which spread quickly through the lymphatic vessels or bloodstream. Gestational trophoblastic tumour (GTT) is defined as a disease state in which there is clinical evidence of invasive mole or choriocarcinoma the diagnosis of which was formerly almost invariably followed by death. However many advances in the diagnosis and treatment of GTT have led to a marked improvement in outcome, with many reports of 100% recovery in low risk cases and 93% even in high risk cases. Besides post molar trophoblastic neoplasia, trophoblastic tumour may also follow abortion (30%) or normal pregnancy with full term delivery (20%). Placental site trophoblastic tumours is a variant of GTD but its management differs from GTD.

Materials and Methods
It was a hospital based retrospective study. Medical records and pathology reports of all patients with molar pregnancy treated at Maternity Hospital, Kathmandu during the

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period of March 2004-August 2005 (one & half years) were analysed. 86 patients were included in this review. Medical records of gestational trophoblastic tumour which were diagnosed in the case of rising or persistent plateau in the hCG level, histopath proven choriocarcinoma or imaging diagnosis of metastatic disease were also studied. The following pre evacuation clinical features were studied in all patients: age, parity, estimated gestational age at the time of evacuation, presence or absence of vaginal bleeding, uterine size in relation to gestational age, ultra sonogram report and urinary beta human chorionic gonadotropin (hCG) level.

Majority of cases received oxytocin infusion one hour prior to suction evacuation which was performed under general anaesthesia. The tissue obtained during evacuation was sent for histopathology and reports were followed.

Results
A series of 86 cases of molar pregnancy was managed in Maternity hospital over a period of one and half years constituting the incidence of 1:291 live births (n=25105). Thirty six out of 86 cases (41.86%) presented between 20-29 years of age but 6.9% (n=6) cases were of more than 40 years of age (Fig.1). 40.6% cases (n=36) were para 1 & 2 (Fig.2). Few cases (9.3%) were grand multipara. 30/86 (34.88%) presented in 1st trimester and 45 cases (52%) in 2nd trimester but 9 cases had no relevance to gestational age since they presented as PGTT (n=6), choriocarcinoma (n=2), one lactation amenorrhoea with molar pregnancy (Fig.3). 58 cases (67.44%) were diagnosed as hydatidiform mole by USG done for pregnancy confirmation and 9 cases (10.46%) diagnosed as missed abortion turned out to be as hydatidiform mole later during evacuation. Remaining 19 cases diagnosed as molar pregnancy on clinical suspicion were confirmed with high level of urinary beta hCG (Fig.4). Vaginal bleeding was the commonest mode of presentation (75%) among the total cases of molar pregnancy (Fig.5). Regarding the relation of uterine size to gestational age, 41(47%) presented as large for gestational age, 13 as equal to gestational age and 9 cases with irregular bleeding without amenorrhoea (Fig.6). All the cases had haemoglobin and blood grouping done but pre evacuation urinary beta hCG was advised in 55 (63.95%), post evacuation in 21 (24.40%) cases only. 10 (11.62%) were discharged without doing baseline urinary beta hCG (Fig.7). Among the total 86 molar cases main modality of treatment in 76 cases was suction evacuation (88.37%) under general anaesthesia following oxytocin drip one hour prior to the procedure, two cases underwent total abdominal hysterectomy (one for choriocarcinoma and next for no response to chemotherapy following evacuation). Ten cases received chemotherapy (Methotrexate rescue regime) for persistent GTT (Fig.8). Majority of them had A positive (36/86) & O positive (37/86) blood group (Fig.9).
30/86 (34.88%) presented in 1st trimester & 45/86 (52%) in 2nd trimester. But 9 cases had no relation to Gest Age since they presented as PGTT (6), Chorio (2), LA with H. mole (1).

**Fig. 3: Gestational Age Distribution**

41/86 (47%) presented as large for gestational age. 9/86 presented with irregular vaginal bleeding without amenorrhoea.

**Fig. 6: Relation of Fundal Height to Gestational Age**

58/86 (67.44%) were diagnosed as H. mole by USG while confirming pregnancy & 9/86 (10.46%) as missed abortion, later turned H. mole during evacuation. Remaining 19 cases were diagnosed on clinical suspicion & confirmed with high level of U BhCG.

**Fig. 4: Mode of Diagnosis**

76/86 (88.37%) were treated with suction evacuation. 2/76, underwent surgery (one chorio & next not responding to chemo after evacuation). 10 pts. received chemotherapy.

**Fig. 8: Mode of Treatment**

Majority of them had O & A positive blood group.

**Fig. 9: Blood Group & Molar Pregnancy**

**Discussion**

Molar pregnancy (Hydatidiform mole) is an abnormality of the placenta and present in two types, complete and partial. Molar pregnancy is significantly more common in extremes of age.
About 1 in 1500 pregnancies is molar. Women who are over age 40 or who have had a previous molar pregnancy are at increased risk of molar pregnancy. Diagnosis is confirmed by ultrasonography and inordinately high hCG levels. Complete and partial mole persist in 20 and 5 percent respectively following evacuation and the remaining abnormal tissue may continue to grow. This is called persistent gestational trophoblastic disease (GTD) and of these 2 to 3% become choriocarcinoma. Treatment with chemotherapy nearly cures 100% of the cases. The risk that a mole develops in a future pregnancy is only 1 to 2 percent.

The present study shows the incidence of 1: live births and majority of them were between 20-29 years age group.

There is some variation in the incidence of GTD throughout the world. In Japan, which has the highest incidence of GTD, hydatidiform mole complicates 2 of every 1000 pregnancies. The rate is lower in the United States about one per 1000. Choriocarcinoma is much less common in the United States (1 in 30,000 pregnancies) but, in Africa, it is one of the leading malignant tumours in women. Differences in diet, in particular deficiencies in carotene and animal fat, may contribute to these variations.

The best established risk factor for GTD is age. Compared to the risk of GTD in the general population of reproductive age women, the risk is significantly higher in those older than 35 and slightly increased among those under age 20. Nevertheless, most of GTD occur in women under 35 because of the greater number of pregnancies among younger women. Paternal age does not appear to influence the incidence of GTD.

Assisted reproductive technology has enhanced the fertility of older women, which may increase the proportion of cases in this age group. This is of concern because malignant sequelae occur more frequently in older patients.

A number of reports noted a 70% increase in the risk of GTD among women who had never given birth, while increasing parity was a protective factor. This association has not been explained and has not been found in all series. Present study showed the main bulk with para one two.

A history of prior spontaneous abortion also appears to increase the risk of GTD. In one study, women with two consecutive spontaneous abortions were 32 times more likely to develop a complete mole than women who had previously delivered term babies.

Increased serum beta-hCG is associated with all forms of GTD and the availability of highly sensitive, quantitative assays permits early diagnosis. There is wide variability in the accuracy of different assays for serum beta-hCG with radioimmunoassay being more accurate than other methods. However, false positive tests can occur.

Unfortunately serum beta hCG is not available in our hospital so urinary beta hCG is used for the diagnosis as well as for follow up. Preevacuation hCG has been in practice since past 1-2 years in the hospital where this study was conducted.

Ultrasonographic examination is often useful for making a preliminary diagnosis. The widespread practice of almost routine ultrasound imaging in early pregnancy has contributed to the diagnosis of GTD at a much earlier gestational age. Earlier diagnosis decreases the frequency of manifestations of GTD such as thyrotoxicosis, hyperemesis and pre eclampsia. However, despite earlier diagnosis, the incidence of persistent GTD following evacuation of a mole has not changed.

Ultrasonography was also the main stay of diagnosis in the present study as well. Although the risk of GTD in subsequent pregnancies is the same for either complete or partial mole, the risk for persistent disease after evacuation is higher for women with a complete mole (20 vs 4%).
Limitation of the present study is small sample size and short time frame which may not reflect the true incidence and clinical profile of molar pregnancy of the country. Baseline investigation were also not done in all cases. Postevacuation follow ups were inadequate as well.

Conclusion The contribution of ultrasonography in the diagnosis of pregnancy and hydatidiform mole is widely recognised. The optimal management of gestational trophoblastic disease depends on prompt diagnosis, correct stratification of the risk category and appropriate treatment using various modalities such as chemotherapy and surgery.

References


Original article

Retrospective Study of HIV Infection among Migrants and House Wives in ART Centre Dhangadhi of Far Western Nepal


Abstract

Retrospective study of 1032 HIV / AIDS patients' personal record file of ART centre Dhangadhi, Seti Zonal Hospital who visited the center from December 2006 to April 2008 was done. The study was done to determine the percentage of migrants amongst the HIV positive people, sex distribution, and age distribution, level of literacy and mode of transmission of the disease amongst the HIV positives.

Out of the 1032 patients in the time frame described, 89.06% were migrants and their wives. Among them 339 were migrant males & 581 their house wives. Thus, 56.29% migrants' housewives comprised the entire study group, out of which 58.54% were with their husbands and remaining 41.46% were already widowed. The husbands of widows died with AIDS previously due to lack of treatment and HIV information services.

Sexual activity is the major and most predominant mode how people in our study group acquired the infection.

Key Words

HIV/AIDS, Migrants, Risk groups, Sexual behavior.

Introduction

Far west region covers almost 1/5th territory of Nepal. Population of this region is 25, 52,139 which is 1/10 of the total population of Nepal. It has nine districts out of which two are in Terai and seven in hilly mountains. ART center Dhangadhi is located in Seti Zonal Hospital in Kailali district, which is the major referral centre of far west Nepal.

Socio economic status of this region in comparison to other parts of Nepal is very low. The major income source of this area is migration and labor work in the neighboring country India where young and middle aged Nepalese people go to the major Indian cities like Mumbai, Delhi, Bangalore, Pune, Haryana to get temporary jobs as labourers. Literacy rate of this area is also very low. The main problems of this region are poverty, illiteracy, ignorance and political conflict (political conflict being the
problem at the time when the study was conducted).

In span of less than three decades, HIV/AIDS has emerged as the single most challenge to public health, human rights and development of this new millennium.\textsuperscript{1,2} By the end of 2007, it was established that 33.2 million people (30.6 - 36.1 million) across the world were living with HIV and 70,000 of these people were living in Nepal.\textsuperscript{3}

Nepal is experiencing transition in HIV epidemic\textsuperscript{,4} various predisposing factors are prevalent for the rapid spread of HIV in Nepal. Migration is one of the many social factors that have contributed to the AIDS epidemic. According to data by an international organization, migrants who crossed national borders increased from 101 million in 1985 to 175 million in 2000, while a similar number of people may exist as internal migrants within national borders.\textsuperscript{1,5,6}

Broadly the migration pattern in Nepal is divided into two categories: external and internal.\textsuperscript{1}

It is estimated that as many as one million Nepalese currently migrate every year to India for employment. Most of them are men and most migration is circular i.e. men work away from home and family for periods of several months, returning briefly for major festivals or to harvest crop\textsuperscript{,}. The national HIV AIDS strategy (2000 - 2006) in Nepal has identified migrants’ populations; especially labor migrants to India, as one of the vulnerable groups for HIV infection. Two studies have examined the prevalence of HIV among male migrants’ returnees from India and found the prevalences of 3.7% and 10.3%.\textsuperscript{3,9,10,11}

This study was done to determine the percentage of migrants and their housewives amongst the HIV infected who visited ART clinic Dhangadhi according to their age, sex, socioeconomic status, literacy, demographic distribution and mode of transmission of HIV.

Materials and Methods

Retrospective study of HIV/AIDS patients’ personal record file of ART (Anti Retroviral Therapy) centre, Dhangadhi.

Retrospective data of 1032 HIV reactive patients who directly visited or were referred to ART clinic Seti Zonal Hospital, Dhangadhi Nepal for counseling and treatment of HIV infection from December 2006 to April 2008 (Magh 2063 to end of 2064). Details regarding age, sex, address, mode of transmission, literacy, socioeconomic status were recorded.

The age groups were grouped at between 15 to 20 years into one as this age group people are normally internal migrants and also this is the pubertal age where there is increased sexual curiosity. Then onwards age groups are grouped into 21-30 into one since this is the age group that comprises normally of married people who go outside the country as external migrants. And the other group as 31-50 years because this is the age group that is married and has been external migrant and doing in and out of the country for quite sometime.

The study group that was chosen was confirmed to be HIV positive by three rapid tests: Determine, Unigold & Capillus. Complete clinical examination was done before institution of ART; that included physical examination, WHO clinical staging, performance scale, CBC, VDRL, LFT, RFT, R/E of urine, CXR P/A view, and sputum for AFB for 3 days and CD4 counts measurement. Suspected cases of HIV (not laboratory proved) and STI cases, which came for treatment, were excluded from the study. ART centre Dhangadhi provides the complete care of the HIV infected patients including treatment of opportunistic infections, hospital admission for serious cases, STI treatment and antiretroviral therapy.

This ART centre is the clinical based targeted intervention program for the control of STI/AIDS.

Result
1032 HIV infected individuals were recorded. Among them 339 were migrants & 581, housewives of migrants, thus total numbering 920. FSW-7, Businessman -6, Dependent babies -99. Chart shows that in the study group, migrants and their wives comprised 89.06%, businessmen 0.62%, female sex workers 0.68%, and dependent babies 9.6%.

Similarly, among the infected housewives, 58.54% were with their husbands and remaining 41.46% were widows. The husbands of widows died with AIDS previously due to lack of treatment and HIV information services.

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Particulars</th>
<th>Value</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sexual contact</td>
<td>915</td>
<td>89.06%</td>
</tr>
<tr>
<td>2</td>
<td>Unknown</td>
<td>3</td>
<td>0.28%</td>
</tr>
<tr>
<td>3</td>
<td>Blood Contact</td>
<td>1</td>
<td>0.096%</td>
</tr>
<tr>
<td>4</td>
<td>Drug User</td>
<td>10</td>
<td>0.96%</td>
</tr>
<tr>
<td>5</td>
<td>Vertical</td>
<td>99</td>
<td>9.6%</td>
</tr>
</tbody>
</table>

84.30% patients were from far western region where 60% females and only 40% males were infected. However in other regions, female patients were less than males. From mid-western region, 15.11%, from western region 0.096%, and from central region 0.58% were coming getting ART services. No any patient from the eastern region.

Level of literacy was seen to be directly inversely proportional with the risk of acquiring the HIV infection. Table 4 shows that the highest percentage of patients were illiterate (77.13%) and that decreasing percentage of patients was found on increasing education level.
found at second lowest risk group i.e. 5.61% male and 3.97 % female. Among them females were found 33.72% and males 24.22% in the age group 31-50 years and no female is recorded from the age group above 60. Dependent babies were found at risk through their infected parents (9.59%) whereas FSWs comprised only (0.68%)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Male (%)</th>
<th>Female (%)</th>
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</thead>
<tbody>
<tr>
<td>&lt; 5 yrs</td>
<td>2.61%</td>
<td>0.00%</td>
</tr>
<tr>
<td>6 - 14 yrs</td>
<td>3.00%</td>
<td>0.870%</td>
</tr>
<tr>
<td>15 - 20 yrs</td>
<td>2.13%</td>
<td>3.56%</td>
</tr>
<tr>
<td>20 - 30 yrs</td>
<td>20.83%</td>
<td>24.22%</td>
</tr>
<tr>
<td>31 - 50 yrs</td>
<td>33.72%</td>
<td>34.00%</td>
</tr>
<tr>
<td>51 - 60 yrs</td>
<td>1.25%</td>
<td>1.84%</td>
</tr>
<tr>
<td>&gt; 60 yrs</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
</tbody>
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![Chart 5](chart.png)

**Discussion**

Due to outright poverty and limited economic opportunities, migration of people from rural areas to urban centers and mainly across the open borders to India has increased. There is a data of 2003 CREHPA/FHI that annually 6,00,000 to 1.2 million people migrate to India in which the far western region leads other regions in its percentage of migration. 12,13

The migration of people has been playing very significant role in transmission of this disease and the epidemic is mainly concentrated among them. 14,15 Mostly men migrate without wives and families. They have poor understanding of HIV transmission, low literacy, low income, and poor access to general health service. 2,7

The infected migrants’ comprising 89.06% in this study indicates that they have significant role in HIV transmission, because they visit female sex workers frequently and most of them have little or no access to HIV information, health services, and means of HIV / AIDS prevention. Because of risky sexual behaviors including unprotected sex with female sex workers and low level of awareness about mode of transmission and prevention, migrants easily become the victim of HIV. The next victim is their housewives due to lack of awareness and understanding about the disease. Ultimately their wives and children become infected too. Businessmen comprise 0.62% , female sex workers 0.68% and drug users 0.96% of the study population. This ratio is very minimal in comparison to the migrants who comprise 89.06%. Similarly comparing females, it is quite surprising to note that such a low percentage of female sex workers comprise the study group in comparison to 56.29% females belonging to the migrant group.

Among these 56.29% housewives of migrants, 58.54% were with their husbands and remaining 41.46% were widows.

A very important analytical subject here is the widows’ case, because the husbands of widows died with AIDS previously due to lack of treatment and HIV information services.

Low literacy level is a strong risk factor for transmission of HIV. Table 4 depicted that highest percentage of patients were illiterate (77.13%) and the decreasing rate of patients was found on increasing education level.

It was seen that 89.06% were infected through sexual contact, 9.59% vertical infection from mothers to child, 0.96% through intravenous drug abuse, & 0.096% through blood contact. Thus it is clear that the migrants were involved in sexual activities and became victims of HIV which was then transferred to their innocent wives.

According to literacy status data, illiterate people comprised 77.13% of the study group. This percentage of infection goes in decreasing order as literacy level increases from primary to higher education (13.27% - primary education, 6.97% - secondary education, 1.93% - higher secondary and 0.77% - higher education). This is probably the reason why the incidence of the disease is so
high amongst migrants who are usually illiterate. The percentage of female sex workers was 0.68%, which is very very low in comparison to house wives of migrants; here we can presume that they are aware about HIV and its mode of transmission; like educated people and businessmen. The percentage of dependent babies is 9.59%. They were innocently infected due to lack of awareness in their mothers about the mode of transmission of disease to their children.

The chart 5 shows that the age of most patients ranged from 31 to 50 years (57.94%). The age group of 20 to 30 was found at risk (29.16%) and only 0.19 % was recorded from age group above 60 years. The children below the age of 14 year were found at second risk group i.e. 5.61% male and 3.97 % female.

In the age group 31-50 years. 33.72% were females and 24.22% males and no female is recorded from the age group above 60.

**Conclusion**

The HIV epidemic is highly concentrated among migrants and their house wives. Education, socioeconomic status, age and awareness play significant role in transmission of this disease. The illiterate people, migrants who come in sexual contact without precautions due to lack of knowledge about its transmission are primary risk groups. The innocent house wives are secondary victims of HIV due to infected husbands and babies are infected due to their infected mothers. The results of this study have clearly delineated different areas where HIV/AIDS prevention campaigns and programs need to be focused.

**References**