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Role of Hysterectomy as a Better Alertnative in Invasive Mole

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ABSTRACT: Aim: Evaluation and identification of better management for invasive mole.

Methods: A retrospective study on case of invasive mole done at Government Cancer Hospital, Aurangabad and Medical College from January 2018 to May 2019 .Total 10 cases was enrolled. Patients were selected by B-HCG and ultrasonography feature to classify them into invasive mole. The data was analysed on the basis of demography, obstetric history, treatment decided for individual case, operative events, and intro/post operative complications. Treatment modality was decided was taken into consideration patient's willingness was to take follow up, parity , need of further fertility , complications present during medical management .

RESULTS- The mean age of invasive mole was 30.1 years± 5.2, 50% of the study population falls in 31-40 years of age group. Gravida 4 group (40%) has the highest occurrence of invasive mole. In our study 60% cases belongs from gestational age group of 9-11 weeks .Chemotherapy alone cured 5 cases (50%), hysterectomy was needed in 4 cases(40%) . One patient was started initially on chemotherapy but later ended up with hysterectomy accounting for 10% due to bleeding. The major complication was maternal death due to lung metastasis accounting for 10 %.

Conclusion: Hysterectomy is feasible in invasive mole especially in cases particularly if patient is no longer willing for future fertility as complications involved are lesser especially in cases who lose follow-up.

Key words: Invasive mole, Hysterectomy, Gestational trophoblastic tumors, Human chorionic gonadotropin, Chemotherapy.

I. INTRODUCTION

Gestational trophoblastic disease (GTD) forms a group of disorders spanning the conditions of complete and partial molar pregnancies through to the malignant conditions of invasive mole, choriocarcinoma and the very rare placental site trophoblastic tumour (PSTT). There are reports of neoplastic transformation of atypical placental site nodules to placental site trophoblastic tumour. If there is any evidence of persistence of GTD, most commonly defined as a persistent elevation of beta human chorionic gonadotrophin (βhCG), the condition is referred to as gestational trophoblastic neoplasia (GTN)(1) Gestational trophoblastic neoplasia (GTN), is recognized as the most curable gynaecologic malignancy. Amongst it, invasive mole follows approximately 10–15% of complete hydatiform mole. We have presented case series of invasive mole in this article which concentrates on its management part. Invasive mole (IM) is common manifestation of GTN characterized by the presence of whole chorionic villi that accompany excessive trophoblastic overgrowth and invasion. These tissues penetrate deep into the myometrium sometimes involving the peritoneum or vaginal vault. Such moles are locally invasive but generally lack the pronounced tendency to develop widespread metastases typical of choriocarcinoma. (2) Invasive mole is penetration of molar tissue (complete or partial mole) into myometrium or uterine vasculature . Edematous villus and proliferative trophoblasts invade myometrium so they can be distinguished from choriocarcinoma. (3) HCG level (>100000 mIU/ml), excessive uterine enlargement, theca lutein cyst size ≥6 cm are considered as high risks for developing post molar tumors (high risk mole) (3). The most common symptom of invasive mole is persistent vaginal bleeding after evacuation of molar pregnancy (sub involution of uterus and persistent theca lutein cyst is another symptom). The rise in βHCG titer is a laboratory test for diagnosis of invasive mole in follow up of molar pregnancy. Although definite diagnosis of invasive mole is based on pathology (4), with βHCG or radiologic diagnosis (5), invasive mole is diagnosed as well . Invasive mole is curable with chemotherapy but hysterectomy decreases the need for multiple courses of chemotherapy and in patients with heavy bleeding or sepsis for control of

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complication and stabilization, chemotherapy is needed (6).

II. MATERIAL AND METHODS

This prospective observational study was carried out on patients of Department of Obstetrics and gynaecology at Government Cancer Hospital , Aurangabad . A total 10 adult subject were enrolled according to inclusion criteria.

Study Design: Prospective observational study.

Study Location: This was a tertiary care teaching hospital based study done in Department of Obstetrics and Gynaecology at Government cancer hospital, Aurangabad.

Study Duration: January 2018 till May 2019 (1.5 years)

Sample size: 10 patients

Sample size calculation: Universal sampling was done which included all patients fir under inclusion criteria.

Subjects & selection method: The study population was drawn from eligible patients who presented to OBGY OPD of Government cancer hospital, Aurangabad. Patients who satisfied the criteria from ulatrsonography were included. The further management was decided depending upon B-HCG, ultrasonographic findings, clinical evaluation.

INCLUSION CRITERIA---All the cases reported of invasive mole to Government Cancer hospital, Auranagabad.

EXCLUSION CRITERIA---All other cases of gestational trophoblastic neoplasia except invasive mole were excluded.

Methodology- Total 10 patients were enrolled for invasive mole management evaluation series . Those who fulfilled the criteria of GTN i.e sympyoms and signs like vaginal bleeding , rising B-HCG plateau , intra-myometrial vascular lesion were enrolled in our case series .Cases diagnosed as a vesicular mole on ultrasonography underwent suction and evacuation and chemotheraphy . These cases were followed up. Meanwhile, B-HCG values were assessed which would be helpful to plan further management and future prognostic value. Patients with GTN were followed with weekly quantitative B-HCG levels until normal for three consecutive weeks and then monthly for 12 months .Informed consent was taken which explained the risk of conservative management, risk of chemotherapeutic agents, and need of hysterectomy particularly in patients who desired fertility. Cases with stable general condition, assessable to follow-up, desirous of future reproduction, where uterus can be conserved were treated with chemotherapy. All the patients were followed with conservative management with the help of clinical evaluation and B-HCG monitoring. If general condition deteriorates, uterine size doesn't decrease, bleeding continues, B -HCG level increases then such patients were posted for hysterectomy with informed consent. Parous patients with completed family and no desire of future reproduction were posted for hysterectomy with postoperative chemotherapy cycles usually two cycles with B – HCG monitoring .Taking chemotherapy in consideration, we administer MTX (Methotrexate) in an eight-day treatment regimen consisting of four administrations of MTX given at 1 mg/kg every other day with folinic acid 0.1 mg/kg given on intervening days. In patients with hysterectomy preoperative single cycle is given to keep tumor cells in suppressed state.

Statistical analysis - Data was analyzed using SPSS version 20.

III. RESULTS

1- Total patients = 10
2- Age distribution

Age group	No. of patients	Percentage
15-20 yrs	1	10%
21-30 yrs	4	40%
31-40 yrs	5	50%
>40 yrs	0	0

Table 1- Age distribution of patients

Mean age=30.1 years
Standard deviation=5.72

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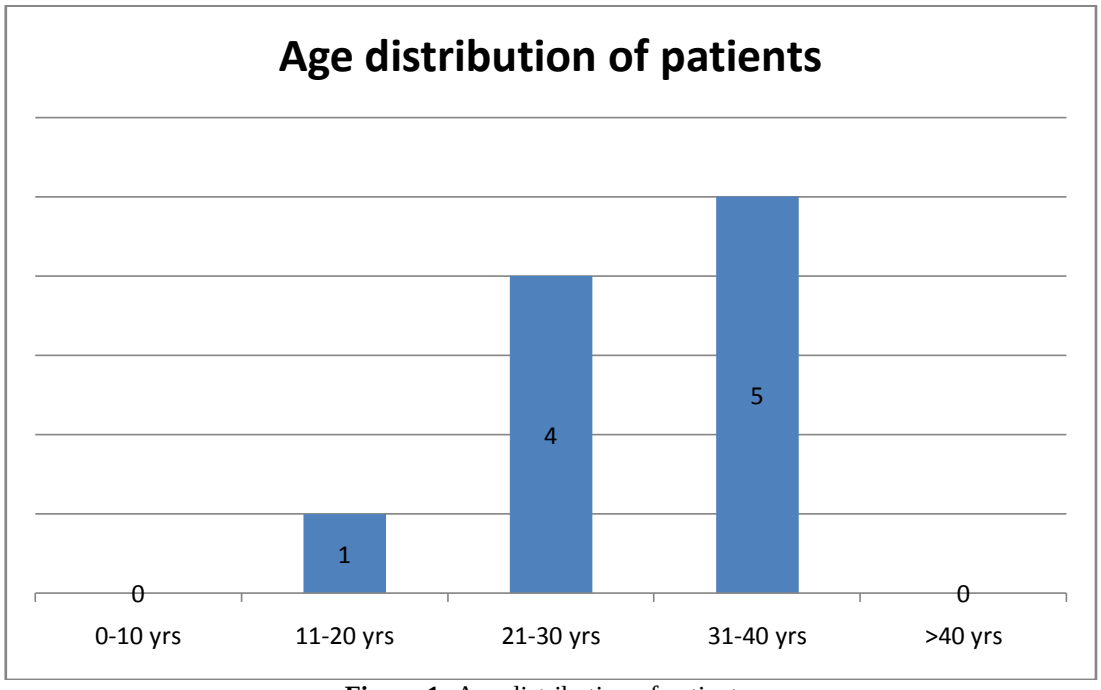

Figure 1- Age distribution of patients.

3-Gravida

Gravida	No. of patients	Percentage
1	1	10%
2	0	0
3	4	40%
4	1	10%
5	2	20%
6	2	20%

Table 2- Gravida of patients

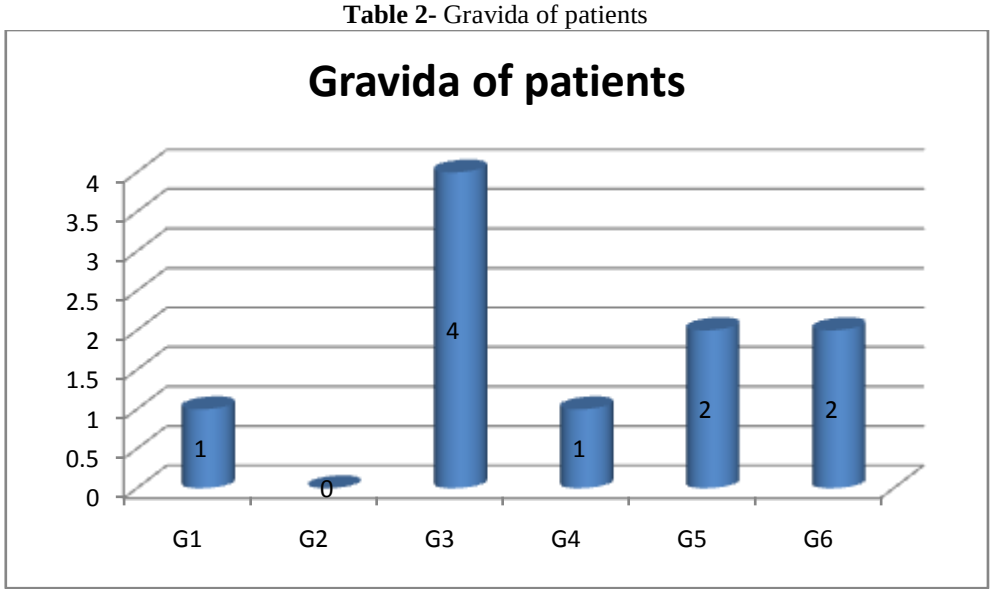

Figure 2- Gravida of patients

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3- Parity of patients

Parity	No. of patients	Percentage
0	1	10%
1	0	0
2	4	40%
3	1	10%
4	2	20%
5	2	20%

Table 3- Parity of patients

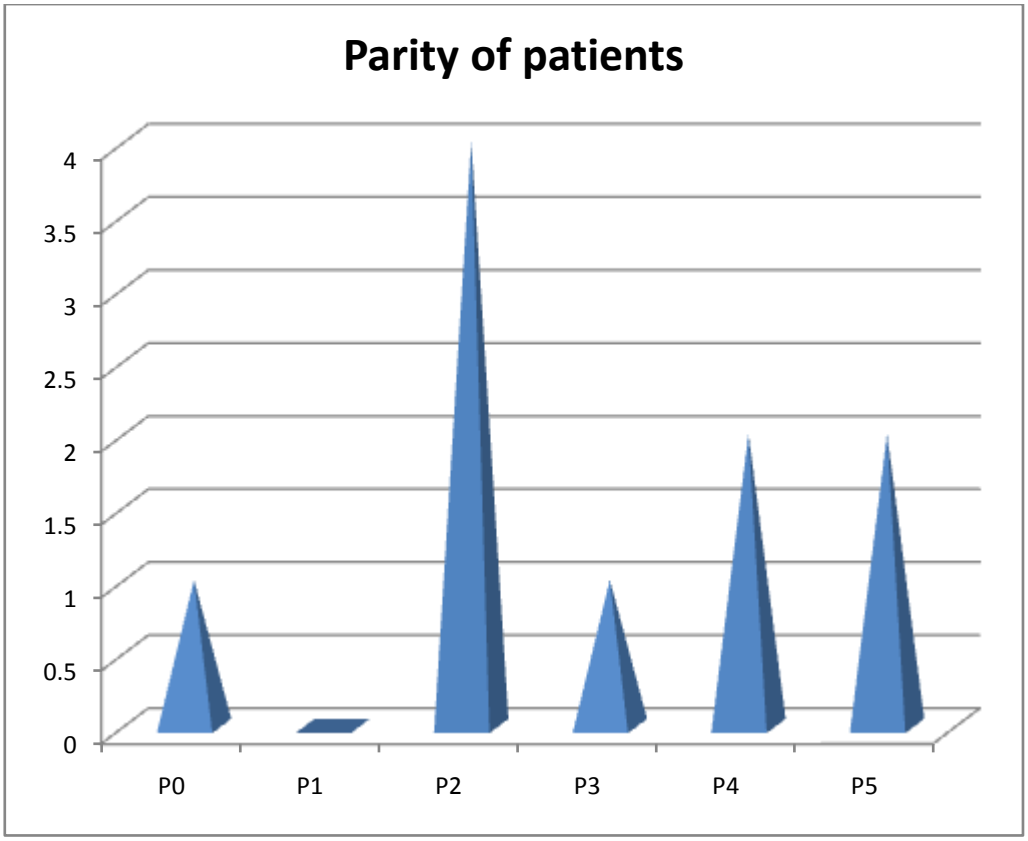

Figure 3- Parity of patients

4- Gestational age

Gestational age	No. of patients	Percentage
<5 weeks	0	0
5-10 weeks	4	40%
10-15 weeks	6	60%

Table 4- Gestational age

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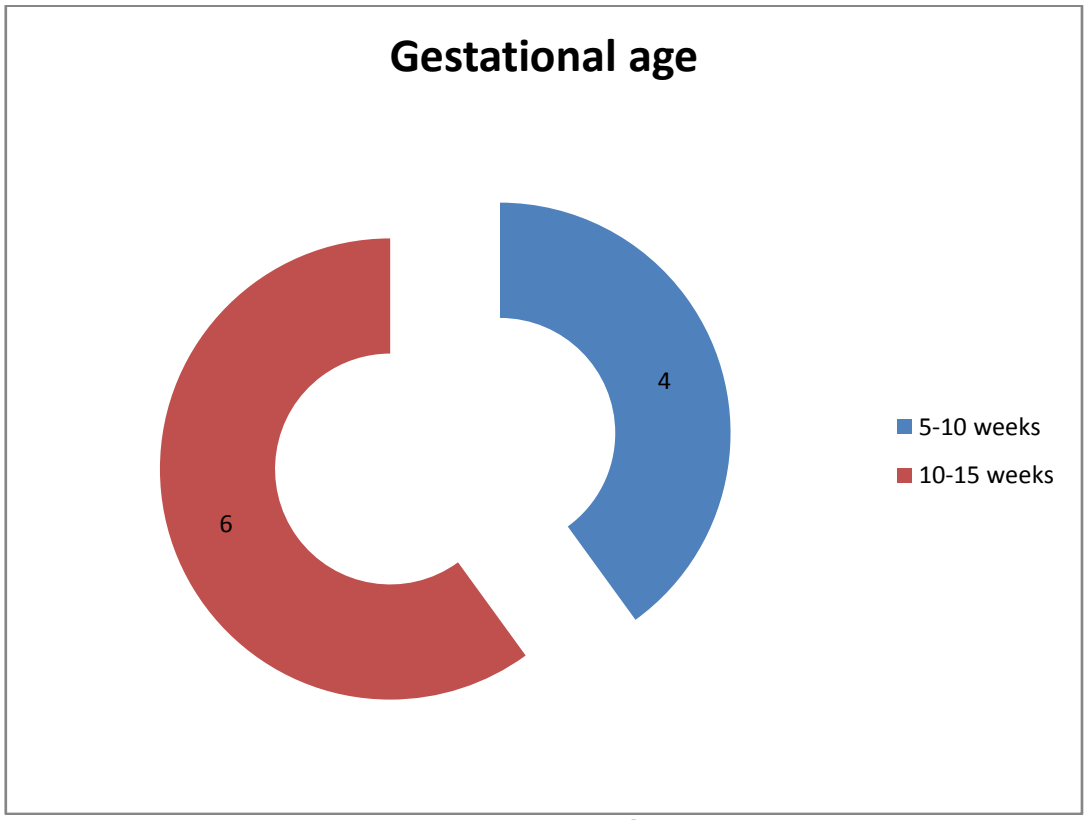

Figure 4- Gestational age

5- Initial treatment

Treatment modality	No. of patients	Percentage
Hysterectomy	4	40%
Chemotherapy	6	60%

Table 5- Initial treatment

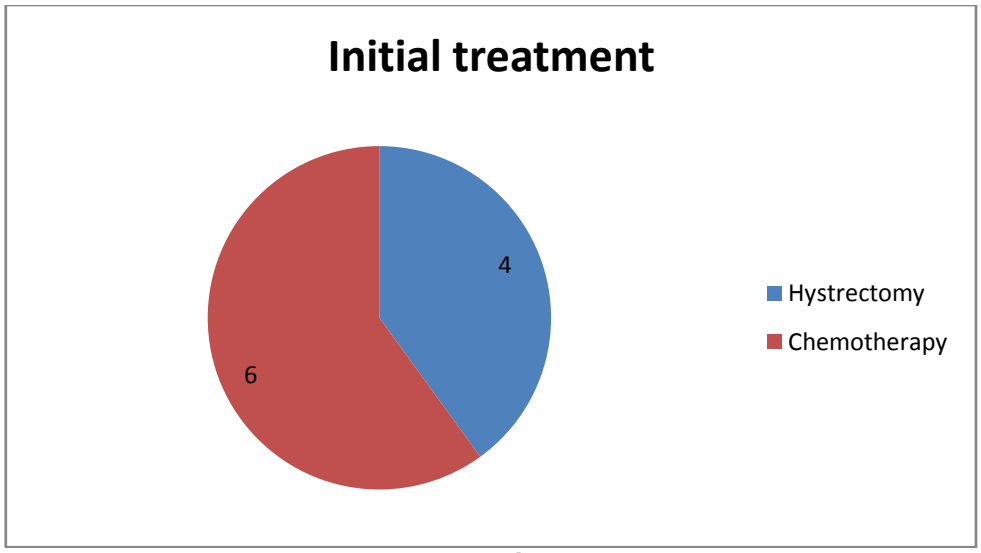

Figure 5- Initial treatment

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6- Beta-HCG levels

Beta-HCG levels	No. of patients	Percentage
50000-1 lakh	1	10%
1- 1.5 lakhs	3	30%
1.5- 2 lakhs	3	30%
2- 2.5 lakhs	3	30%

Table 6- Beta-HCG levels

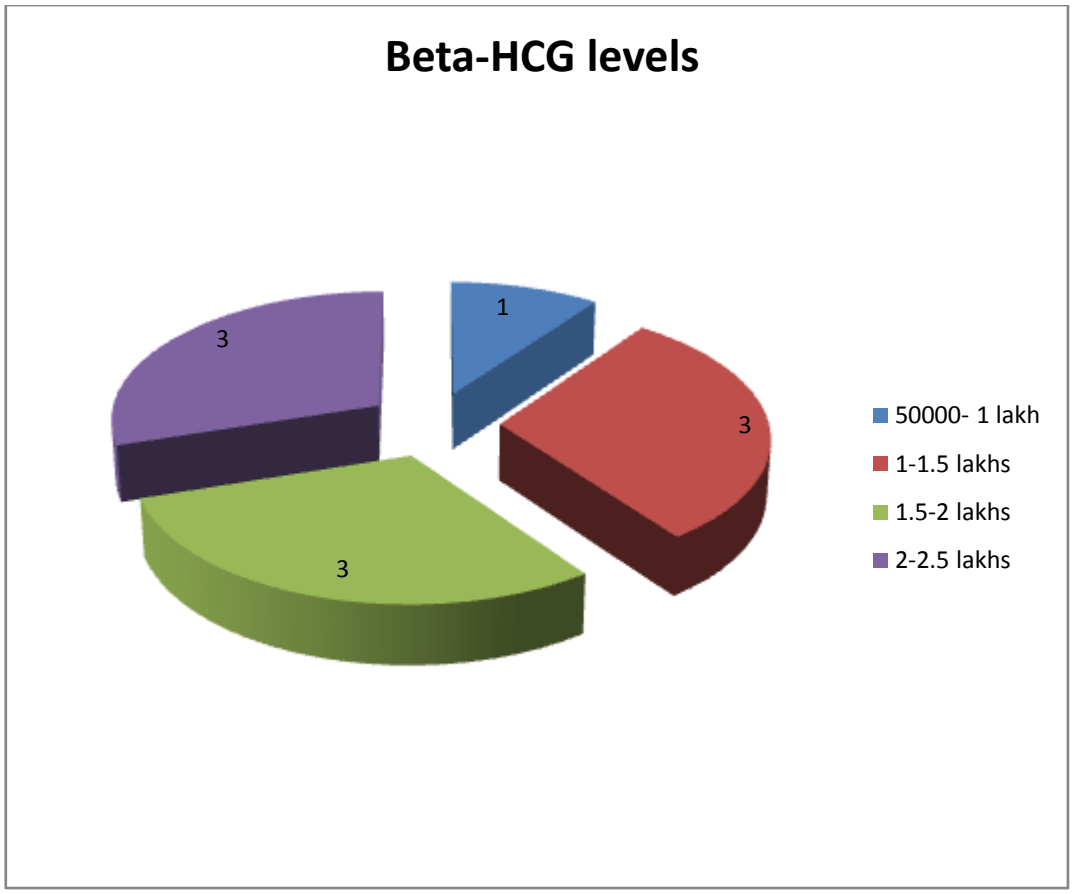

Figure 6- Beta-HCG levels

7- Final treatment

Treatment modality	No. of patients	Percentage
Chemotherapy alone	6	60%
Hysterectomy alone	0	0
Hysterectomy followed by chemotherapy	4	40%

Table 7- Final treatment

[2 cycles of chemotherapy were needed post hysterectomy]

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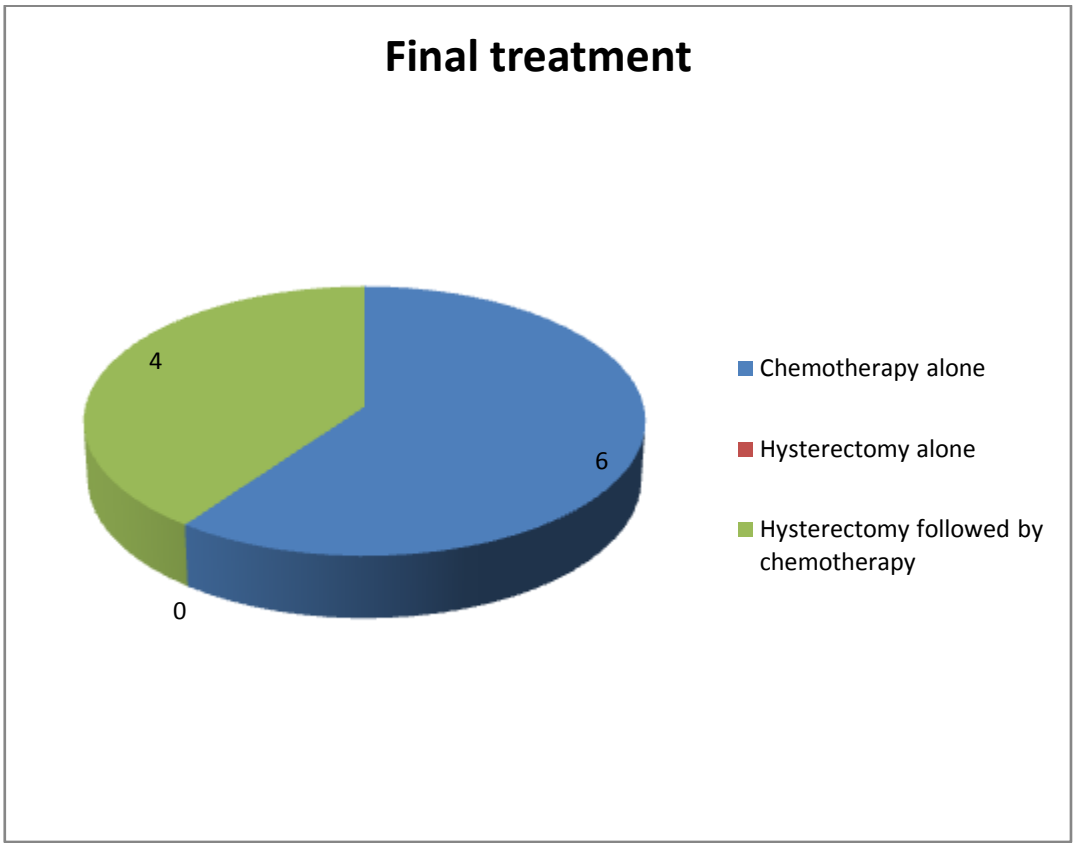

Figure 7- Final treatment

8- Complications encountered

Complication	No. of patients
Wound gap	1
Death	1

Table 8- Complications encountered

[Death was due to pulmonary metastasis]

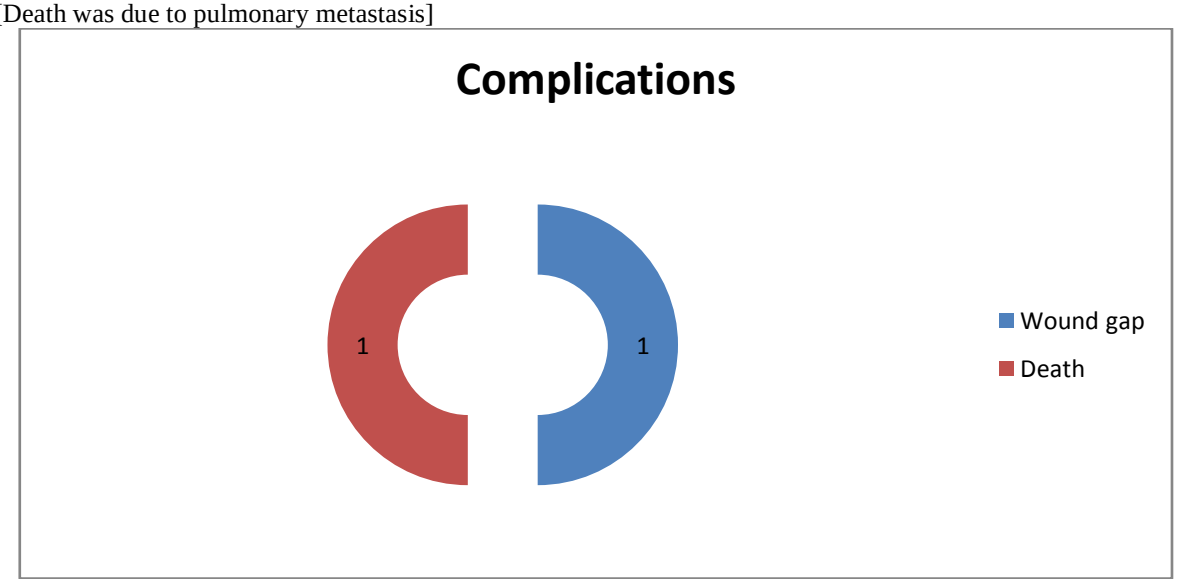

Fig.8- shows complications.

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IV. DISCUSSION

Overall cure rate of invasive low risk patients is nearly 100% and in high-risk patient 90%. In rare cases, molar tissue traverses thickness of myometrium and leads to perforation and acute abdomen and invasive mole infrequently metastasis. The best treatment option is chemotherapy (according to stage and score with single or multiple agents) while hysterectomy is feasible where future fertility is not desired .In our study ,the total number of patients in this study are 10 and results are explained accordingly by each parameter.

AGE- The mean age in is group 5.72. Overall distribution of age in particular age group is as follows – 10% of the study population was in 16-20 years age group , 40% of the study population was in 21-20 years age group, 50% of the study population was in 31-40 years .The mean age group is 30.1± 5.72. Sores et al the 20-34 age group predominated (65%)(7).

Gravida-The gravida status of invasive mole is as follows- gravida one accounts for 1 (10%) , gravida three accounts for 4(40%) , gravida4 accounts for 1 (10%) , gravida 5 and gravida 6 accounts for 2 (20%) each respectively . Rachdi et al(8) also states similar results in regards of gravidity .

Parity- The parity status in invasive mole is as follows – para2 accounts for 4 (40%) ,para 4 and para 5 accounts for 2 (20%) each respectively , para 3 accounts for 1(10%) , one patient was primigravida accounts for 10 %. The above matches Igwegbe et al (9)results .

Gestational age – Gestational age distribution in invasive mole is as follows – There were 4 cases (40%) in gestational age of 5-8 weeks and 6 cases (60%) in 9-11 weeks .No data was found regarding this but in our study maximum cases were from 9-11 weeks .

Treatment- The treatment modality used in this study for invasive mole is chemotherapy and hysterectomy. The treatment modality judged in this study is firstly which treatment modality was initially used for treatment after investigating. The initial treatment modality used is hysterectomy in 4 (40%) patients and 6(60%) underwent chemotherapy. The final treatment is as follows, chemotherapy alone cured 5cases accounting for 50%, and hysterectomy was needed in 4 patients accounting for 40%. One patient was started on chemotherapy initially but later ended up with hysterectomy accounting for 10% due to bleeding as a complication. In our study all the patients were given 2 cycles of chemotheraphy post hysterectomy. In this Pezeshki et al hysterectomy (28.3 %), and chemotherapy (45.7 %) which matches above result (10). In Y.K.Eysbouts etal (11) hysterectomy was mainstay in localized cases of gestational tropoblastic neoplaisa and in this study 16.5% underwent hysterectomy but the remission rate was 66.2% after primary treatment as hysterectomy , the percentage is little lower than our study and Pezeshki et al (12)as they further classified patients into low and high risk group for gestational trophoblastic neoplaisa and preferred hysterectomy more towards the low risk groups and hence the patient selected are less and hence the percentage is lower but author supports hysterectomy a better alternative in especially low risk, localized cases .

Complications -The complications observed in our study is as follows. The complications belong from both major and minor group. The major complication was maternal death which was seen in patient who had lung metastasis accounting for 10 %. The minor complication of full length wound gap was seen in operated hysterectomized patient accounting for 10 %. Pezeshki et al(12) reports no significant acute complications were reported by (12) . Rachdi et al(8) states the most common metastatic sites was lung (30%) and vagina (13) so it was in our study .

V.CONCLUSION

In the study conducted for treatment evaluation of invasive mole, it can be concluded that in patients where uterus needs to be conserved chemotherapy should be used but in cases where further fertility is not desired, hysterectomy is a good option with post operative chemotherapy especially where metastasis and losing follow-up is a possibility. Also it avoids unnecessary chemotherapeutic exposure to patients and also gives a definitive treatment to the patient with less anticipation of risk as most patients lose follow-up.

Conflict of interest - None.

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