



Comparison of two methods of treatment of gestational trophoblastic disease with weekly single dose intramuscular methotrexate and 8 days intravenous

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- **Background and objective** : The basic treatment of gestational trophoblastic disease (GTD) is the evacuation of the uterus, followed by chemotherapy. Methotrexate which is called antagonist folic acid and an ant metabolites agent is playing the most important role in the treatment of GTD patients and is known to be an anticancer medication. The efficacy of single agent chemotherapy with methotrexate in low and medium risk GTD is well established but efforts to reduce toxicity and patient time and cost continue.

- The aim of this study is comparison of two methods of weekly intramuscular single dose methotrexate and 8 days intravenous in low and middle risk GTD patients which were chosen to undergo single agent chemotherapy.

Materials and Methods:

- This present clinical trial study was performed for three years(2002-5) in Gynecology oncology department of Ghaem Hospital .
- All patients were classified into two groups. First group consisted of 33 patients that were treated through intravenous injection I mg/m² methotrexate and folinic acid 0.1 mg/m² .It's duration lasted 8 days .

- The second group consisted of 14 patients that received single dose intramuscular injection of 50 mg/m² of weekly methotrexate . These two groups were matched according to , number of pregnancies blood groups, histological characteristics and interval between end of antecedent pregnancy and start of chemotherapy .

- **Results** :The mean age of first group was 25.38 ± 7.33 years and second group was 25.7 ± 7.52 years old $p=0.001$. Response rate with chemotherapy fewer four courses in first group was and in 45.5% second group was 28.2% $P=0.018$. The results showed that 9.9% of the first group 42.1% need an increasing of medication about 1.5 mg/kg/day and 42.1% second group ($P=0.001$).

- Requirement to second line chemotherapy from methotraxte to actinmycin D was 6.6% in first group and 7.1% in second group ($P=0.715$)
Combinations chemotherapy with EMA-CO regimen needed the 9.9% of first group in and 14.2% of the patients in the second group $P=0.652$.

- Eventually both group achieved the complete response with chemotherapy and no recurrence of the disease during the follow-up period.

■ **Conclusions :**

- The weekly single dose Intramuscular methotrexate is an effective ,low cost, inexpensive and accessible method that can be performed in every center for low risk GTD that need single agent chemotherapy as compared with intravenous 8 days methotrexate .

Blood group	Average number of pregnancy	Average age	Number of patients	Demographic data
B=42.4	2.16	25.7	22	First group
O,A=41.6	2.36	25.47	14	Second group
0.837	0.173	0.001	0.006	P

Table I : Demographic data of patients with trophoblastic disease dosage increased 0.5 two groups of submitted to

complete HM	Previous term pregnancy	Low Risk group	Interval between pregnancy and chemother apy fewer<4 months	Demograp hic data
86.8	6.6	21.2	97%	First group
92.9	7.1	42%	71.5%	Second group
0.609	0.281	0.032	0.143	P

P-value	Group		Variables
	Second	First	
0.018	28.5	54.5	Response to treatments in fewer <4 month
0.001	42.1	9.9	Increased dosages to 1.5 mg/kg/day
0.715	7.1	6.6	Submitted to Actinomycin D
0.656	14.2	9.9	Submitted to EMA-CO
0.002	—	6.6	Submitted to EMA-EP

Table II : The comparison result of chemotherapy in patients with gestational trophoblastic disease

