Case Report

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A Study on Neural Tube Defects

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Abstract

The aim is to study the incidence of congenital anomalies in Government Rajaji hospital attached to Madurai Medical College, Madurai. Among the 3288 births during October 2016 to January 2017, there were 74 babies with congenital anomalies, among these 19 babies had neural tube defects. Results were analysed & compared with other studiesreported in the literature. Overall incidence of congenital anomalies 2.25% and theincidence of CNS anomalies was 33.7%. The incidence of neural tube anomalies was 0.57%

Keywords: Neural Tube Defects; Anencephaly; Spina Bifida; Hydrocephalus.

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Methods

The study was done at Government rajaji hospital, attached to Madurai medical college, Madurai. The total number of deliveries was recorded for a period of four months from October 2016 to January 2017. Neural Tube defects were observed in 19 babies

Observaton & Results

Total number of births 3288 , total number of anomalous babies were 74. Following classification was made based on different types of NTD'S

1. Anencephaly was seen in 4 cases, USG was done in all 4 cases and termination was done.
2. Hydrocephalus was seen in 10 cases, 1 case with congenital diaphragmatic hernia [CDH] 1 case was associated with arthrogryposis
   - Case with cystic hygroma with severe spine deformity
   - Case with dysplastic kidney
   - Case with Arnold chiari malformation.

   Rest of the cases had gross hydrocephalus they were terminated.
3. Spinal Defects with or without associated defects in 5 cases

   Spina bifida
   - Case with omphalocele
   - Case with kyphoscoliosis
   - Babies were alive with spinal defect

Study Report

Table 1: Showing relation of maternal age with NTDs

Maternal Age	Anencephaly	Hydrocephalus	Spina Bifida
13-20	0	0	0
21-40	4	10	5
>40	0	0	0
Total	4	10	5

Table 2: Maternal parity with NTDs

Gravida	Anencephaly	Spinal Bifida	Hydrocephalus
1	2	1	2
2	2	3	6
2	0	1	2
Total	4	5	10

Table 3: SHOWING Gestational age among NTDs

Gestational Age	Anencephaly	Hydrocephaly	Spinal Defects
12-20 WKS	4	2	0
21-28 WKS	0	5	5
29-40 WKS	0	3	0
40 WKS	0	0	0
Total	4	10	5

Table 4: Showing consanguinity with NTDs

Degree of Consangunity	Anenchephaly	Hydrocephalus	Spinal Defects
NCM	3	5	3
1	0	0	0
2	0	2	1
3	1	3	1

Table 5: Showing frequency of sex of the baby with NTD'sa

Sex	Anencephaly	Hydrocephalus	Spinal Defects
Female	1	4	3
Male	3	6	2

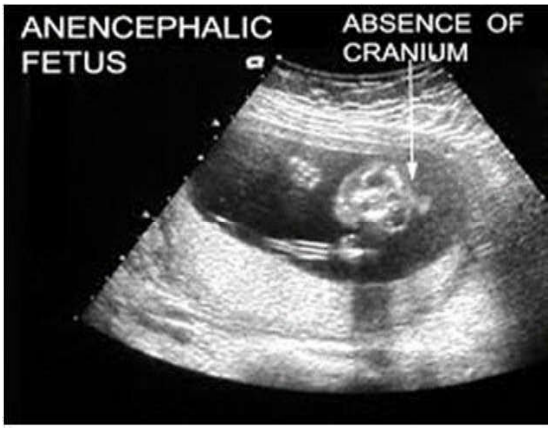

Fig. 1:

Fig. 2:

Fig. 3:

Fig. 4:

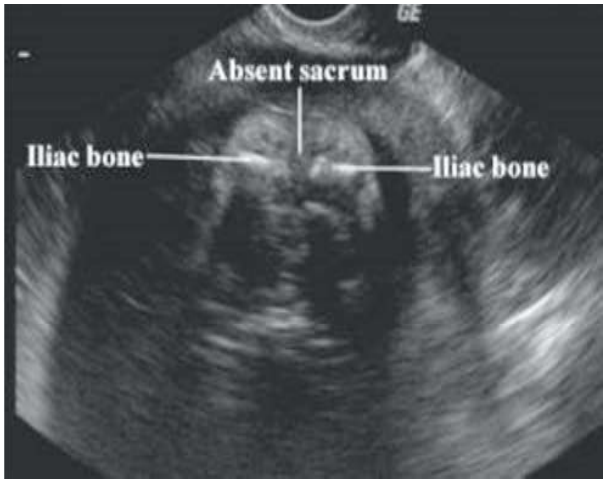

Fig. 5:

Fig. 6:

Disscussion

In the present study incidence of congenital malformation is 2.25% that is comparable with other studies. Incidence of NTDs in the present study is 5.77/1000 births .

Dhapate S.S. et al [2007] reported a study done to detect NTDs with the help of usg. A total of 8640 women attending the antenatal clinic who were referred for routine usg screening included in study. Craniospinal anomalies anencephaly cases were 17 giving the incidence of 48.57%

Incidence of NTDs were similar to this study.

Sania tanveer et al [2008] repoted a study, done in Peshawar among 3310 deliveries NTDs were seen in 46 cases [1.39%] , 21 cases had hydrocephalus , 6 had anencephaly, 8 babies had spina bifida with meningomyelocele and 11 with multiple system involvement. Our present study was similar with more number of hydrocephalus babies.

More number of cases were seen among women of age group 21-28 this was similar to Dhapate S.S. studies.

Conclusion

In the present study the incidence of NTDs is 5.77 per 1000 births. There is decrease in incidence compared to other studies due to proper intake of folic acid in preconceptional period.

Neural tube defects are associated with considerable morbidity and perinatal mortality.

It also points out that NTDs were more common in males and hydrocephalus is more common NTDs.

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