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Non-Immune Hydrops Fetalis Following Intra Cytoplasmic Sperm Injection – A Case Report

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The clinical outcomes of pregnancies established by assisted conception are very important. ICSI (Intracytoplasmic sperm injection) involves consequences in need of extremely close genetic scrutiny as it alleviates long standing infertility by establishing pregnancies for men with very few spermatozoa – even one hundred or less, and the risks of causative genetic lesions under these circumstances could be high. ICSI also raises genetic issues concerned with births generated using spermatozoa from the epidiymis and the testis. Presented here is a case of one such fetus conceived after ICSI.

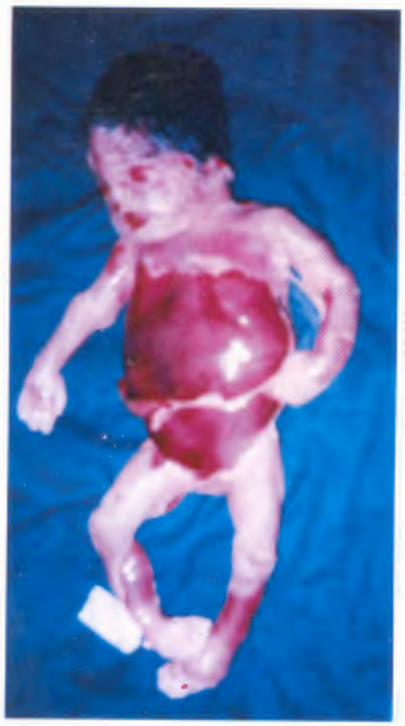

Fig. 1

Case Report

The couple (29 years old wife and 31 years old husband) reported to our clinic on 11-9-2000 with primary infertility after 7 yrs married life and preliminary investigations carried out on the couple revealed that the wife was normal (was ovulating normally, had regular period and had a normal hormonal profile LH-3.9 miu/ml, PRL – 17.98 n/ml, Thy – 2.81 mclU/ml). The husband's semen analysis revealed that he was azoospermic. The couple consented to undergo an ICSI with MESA (Microepididymal sperm aspiration). The wife was down regulated with 0.5 cc suprefact for a month following which she was stimulated with (humagon) human menopausal gonadotropin 75 IU each amp (3 amps) for a period of 11 days along with GnRH 0.1cc. She was administered hGG on the 11th day when her lead follicles were 18 mm and oocyte retrieval was carried out 36 hours later. A total of 16 oocytes were retrieved of which 10 oocytes (M11)were injected with sperm retrieved following epididymal aspiration on 15-12-2000. Two oocytes fertilized and 48 hours later two 6-cell stage embryos transferred back into the uterus. The patient was given luteal phase support of gestone (100 mg daily) and hCG every 72 hours. Pregnancy test was positive 14 days later and on the 21st day a gestational sac was seen measuring 10 mm. The next scan showed a GS of 12 mm, CRL – 36 mm, heartbeat +, ys +, cx length – 4cms, nuchal fold thickness-4mm. 14th week ga scan showed : BPD – 26.9 mm, AC-81 mm, HC / AL – 1.23 HC – 100mm FL-13 mm FL /BPD – 0.48, OFD – 33 mm, Wt.- 138 gms, EDD – 6/9/2000. No apparent anomalies were detected at this stage. The patient reported for next scan at 32 wks. ga. Scanning revealed gross abnormalities in the form of scalp oedema measuring about 4-6 mm. Ascitis in the peritoneal cavity with hydrothorax. Face showed midface hypoplasia with small ostium of mouth. No structural

anomalies were noted in the heart. No arrythemia were noted on earlier occasion The pregnancy ended up in IUD. The pregnancy carried upto 32 weeks was then aborted following induced labor. The skin from the fetus thigh was taken for chromosomal analysis but unfortunately the tissue was dead and so we could not get the chromosomal picture which would have thrown more light had it revealed any structural or numerical abnormalities or any translocations that are often associated with severe forms of male infertility. In retrospect, we did karyotyping of the parents but it turned out to be normal. This helps to counsel the patient in planning out future pregnancies as the cause was not genetic. Non immune hydrops are usually associated with heart deformities but that cause is also ruled out as the fetus had no apparent structural anomaly in the heart suggesting that some other factor was responsible.

In conclusion, special attention must be focused on children arising from men with severe forms of infertility and prenatal diagnosis should be offered to these patients and chromosomal analysis of parents prior to treatment should also be mandatory to help the patients make the right decision.