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SAFETY OF MYCOPHENOLATE IN PREGNANCY

Question:
What is the safety of mycophenolate in pregnancy?

Answer:
A literature search[1-4] revealed a single case report describing the use of mycophenolate in human pregnancy[5].

Human data
Pergola et al., [5] described a 33-year old who received her second kidney transplant when she was unknowingly 6-7 weeks pregnant. During the first-trimester she was exposed to corticosteroids, tacrolimus, mycophenolate, cefepime, vancomycin, nifedipine, trimethoprim/sulfamethoxazole, nystatin, aciclovir and famotidine, and x-rays. The immunosuppressants and famotidine were maintained throughout the latter trimesters. The pregnancy was complicated by gestational diabetes, anaemia and pre-eclampsia and was induced at 34.5 weeks gestation because of worsening hypertension, proteinuria and an acute increase in plasma creatinine. The baby was born with hypoplastic finger and toe nails, and bilateral shortening of the fifth fingers. She had some difficulties post-delivery including episodes of apnoea and bradycardia with feeds. However, she was said to have 'developed well and achieved all developmental milestones' at age 3 years'.
The authors also cited seven other births to the National Transplantation Pregnancy Registry (USA) following *in utero* exposure to mycophenolate. Live births were reported in five of these while the outcome was not known in the remaining two[5]. Further details are lacking.

The manufacturer advises that women of reproductive age should achieve a negative pregnancy test prior to commencing mycophenolate and that effective contraception should be used throughout treatment and for six weeks after stopping therapy[6].

Animal data
Adverse foetal effect including congenital anomalies were observed in pregnant rats and rabbts. The doses of mycophenolate used in these studies were lower than that required to produce maternal toxicity, and were below those usually used during solid organ transplantation[6].

Conclusions:
There is extremely limited information describing the safety of mycophenolate in pregnancy. A single case report described minor abnormalities occurring in an infant born after *in utero* exposure to maternal polypharmacy, and a pregnancy that was complicated by significant medical problems. There are insufficient human data to draw conclusions on mycophenolate's safety. Furthermore, the undefined abnormalities occurring with low mycophenolate doses in rats and rabbits are cause for concern, although it is difficult to translate animal data to humans. Given this, we would advise against the use of mycophenolate in pregnancy unless safer forms of maternal drug therapy do not exist.

References:

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