Pregnancy complicated by gestational trophoblastic disease in a renal transplant recipient

Fertility may return after renal transplantation. Several normal and abnormal pregnancies have been reported. We can find no report of gestational trophoblastic disease arising de novo in a pregnant renal transplant recipient and therefore describe such a case.

Case report

A 22 year old woman developed hypertension and uraemia from presumed chronic pyelonephritis in 1979. There was no evidence of autoimmune disease. She was maintained on haemodialysis until May 1981, when she received a cadaveric renal transplant. Immunosuppressive treatment was given as prednisolone and azathioprine. Four rejection episodes were each treated with high dose pulses of methylprednisolone, and after the third episode continuous low dose cyclophosphamide (30 mg daily) was added for three months. Six months after transplantation her serum creatinine concentration was 110 μmol/l (1.2 mg/100 ml).

Eleven months after transplantation, and after two months of amnemorphine, she aborted spontaneously a hydatidiform mole. Despite uterine curettage on three subsequent occasions, serum chorionic gonadotrophin concentrations remained raised (up to 100 000 IU/l). There was no evidence of extra-uterine trophoblastic disease. She was referred for cytotoxic chemotherapy. During the first course of low dose methotrexate she developed acute abdominal pain, paralytic ileus, and became shocked. Emergency laparotomy showed rupture of the uterus, and a total abdominal hysterectomy was performed. Serum chorionic gonadotrophin values rapidly returned to normal postoperatively and remained so.

Gross examination of the specimen showed a fundal mass with an overlying tear. Histological study showed villi with pronounced trophoblastic proliferation. There was invasion of the uterine muscle and extensive permeation of vessels (figure) by atypical trophoblast. There were features of an invasive mole with possible incipient evolution into choriocarcinoma.

Uterine vein invaded by atypical trophoblast cells. Haematoxylin and eosin ×215 (original magnification).

Comment

Patients with renal transplants have an increased incidence of malignant disease. A proposed reactivation of latent choriocarcinoma has been described after renal transplantation, as has transmission of choriocarcinoma with the cadaver kidney, but no gestational trophoblastic disease arising de novo in a pregnant transplant recipient has been noted.

Gestational trophoblastic disease has a range of malignant potential from hydatidiform mole and invasive mole to choriocarcinoma. The clinical course is determined by factors such as the inherent malignant potential of the trophoblastic tumour and the immunological host response.

In 80% of cases of classic hydatidiform mole human chorionic gonadotrophin concentrations become normal within 60 days of removal of the tumour, reflecting effective host immunological rejection mechanisms. The trophoblastic disease in our patient increased in malignant potential from the initial hydatidiform mole. It may be postulated that transformation occurred because of immunosuppression of the host, induced to prevent rejection of the transplanted kidney.

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Intravenous indomethacin or oxycodone in prevention of postoperative pain

It is an indictment of modern medicine that prevention of postoperative pain has been neglected. Pain seems to be generally accepted as an essential part of the postoperative phase, and patients may suffer intolerable pain despite the plethora of effective analgesics available. Opiates are still the most popular potent analgesics, but they are usually not administered frequently enough or are not administered until the patient complains. Increased interest has recently been shown in continuous intravenous or on demand administration of opiates. 1-4 We compared the efficacy of continuously administered intravenous indomethacin and intravenous oxycodone in preventing postoperative pain.

Patients, methods, and results

Altogether 168 patients (124 women, 44 men) received a single dose of 0.5% bupivacaine as an epidural anaesthetic before operation for various veins or orthopaedic disorders. Immediately after the operation 148 patients were given 25 mg indomethacin (Confortil IV, A/S Dumex, Denmark) and 20 were given 5 mg oxycodone (Oxassut, Leiras, Finland) intravenously over 10 minutes. Thereafter indomethacin (5 mg/h) and oxycodone (2 mg/h) were given as continuous injections by means of an automatic syringe pump (Hostec R-50, Finland) throughout the night after the operation. Supplementary doses of 10 mg indomethacin or 2 mg oxycodone were administered intravenously to patients who complained of pain. A five degree scale of pain (none, mild, moderate, severe, or intolerable) on a time schedule was used to record pain and its duration. Possible side effects were recorded and patients were questioned about their pain on the morning after the operation.

The table shows the incidence and relative duration of pain with each drug. The mean dose of indomethacin was 123 mg and of oxycodone 38 mg. Forty one (27%) of the patients given indomethacin and eight (40%) given oxycodone received supplementary doses of their respective drugs. The incidence of no pain was significantly higher (P<0.01) and the incidence of severe pain significantly lower in patients given indomethacin (P<0.01).

Side effects comprised mild nausea (17 patients (11.5%)) given indomethacin or four (20%) given oxycodone), vomiting (three (2%)) in three (15%) and mild dizziness (seven (4.7%)) in seven (9.5%). Patient acceptance of the treatment was high: 143 patients (97%) given indomethacin and 19 (95%) given oxycodone found it acceptable.

Comment

The lower incidence of postoperative pain and the longer periods without pain (P<0.01 and P<0.05, respectively) in patients given indomethacin show that indomethacin prevented postoperative pain more effectively than oxycodone. The mean dose of indomethacin was only 123 mg whereas that of oxycodone was 38 mg, which is almost the maximum daily dose.

Because of its mechanism of action and other properties it seems logical to administer indomethacin prophylactically and then to maintain a preventive concentration by continuous intravenous injection. An initial intravenous dose of 25 mg and a maintenance dose of 2 mg/h are low enough to permit additional doses when necessary. This regimen resulted in a peak serum concentration of about 2 mg/l and a steady state concentration of about 0.7 mg/l. Indomethacin has the added advantage of being non-addictive.

The type of surgery that these patients had undergone was theoretically suitable for comparing analgesia obtained with an anti-inflammatory agent and with oxycodone. In more severe and deeper pain intravenous indomethacin may be administered together with intravenous opiates because of their advantageous synergism. 5