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P170-Vascular Access for Haemodialysis in Pregnancy – clinical practice and outcomes

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Introduction:

There is little published data regarding the success and outcomes of different approaches to vascular access for haemodialysis in pregnant women. Differences in practice are clinician, centre and country specific (1) although UK guidelines favour the use of arteriovenous fistulae (AVF) over tunnelled haemodialysis catheters (TDCs) for the general cohort (2). Formation of AVF during pregnancy has rarely been reported. One case report describes a new fistula becoming aneurysmal during pregnancy (3) although the frequency of this phenomenon is unknown.

The use of intensive haemodialysis regimes has led to improved pregnancy outcomes among dialysis patients in recent years (4), including improved live birth rates and greater gestational age (5). Reliable and well-functioning vascular access is of paramount importance to facilitate this.

We present a case series of 15 women who required vascular access for dialysis during pregnancy.

Pregnancy outcomes and relative merits and complications of vascular access modalities are discussed.

Methods:

All women who required vascular access for haemodialysis or continuous veno-veno haemofiltration (CVVH) during pregnancy between 2002 and 2018 at a large University teaching hospital were identified, and medical records sourced following local governance approval. Women who were already established on haemodialysis prior to pregnancy were included. Dialysis and pregnancy-related data were recorded.

Results:

A total of 16 pregnancies in 15 women were recorded (1 twin pregnancy). Data are presented in Table 1. 5 women were treated for AKI by CVVH and since recovered: all had temporary dialysis catheters, and 1 episode of line-associated sepsis was recorded.

5 patients had progressive CKD and were commenced on haemodialysis during pregnancy. All but one dialysed via AVF – the remaining patient had a TDC inserted at 27 weeks gestation. One further patient had AVF formation during pregnancy but never required dialysis.

4 patients were already established on haemodialysis prior to pregnancy: 2 dialysed via AVF, 2 via TDC (one switched to AVF later in pregnancy). Pregnancy outcomes were inferior for this group; in keeping with current evidence (6).

A total of 5 patients had new AVF formation under local anaesthetic in pregnancy: mean gestation of formation was 16 weeks, and gestation at first use 23 weeks. Needling problems were reported in 2 patients: one subsequently required single needle dialysis. One patient developed an anastomotic stenosis and was switched back to using TDC. One AVF failed to mature and was never subsequently used. The patients who dialysed via TDC had no reported access complications.

Discussion:

AVF formation in pregnancy appears to be safe up to and including the 2nd trimester. AVFs offer advantages of greater longevity and reduced risk of infection compared with TDCs, but the acceptability of daily needling for intensive haemodialysis regimes in pregnancy may be a limitation (7). Success and adverse outcomes have been noted with both types of access in pregnancy (3, 8), although there is little published

data. Although current practice favours a 'fistula first' policy, a pragmatic approach taking into account the patient's wishes may be the most effective strategy (7, 9).