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Quality of Life after Abdominal Aortic Aneurysm Repair: Similar Long-Term Results with Endovascular and Open Techniques

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In contrast to the significant number of studies[1,2] comparing mortality and morbidity after endovascular or open repair of abdominal aortic aneurysm (AAA), few investigators have examined health-related quality of life. The influence of procedures on patients' quality of life is recognised as an important consideration in the choice of treatment.

Quality-adjusted life years (QALY) take into account both mortality and quality of life. Utilities for a given health state represent the preference that individuals have for this health state and are conceptualised as a single summary measure of health-related quality of life (HRQL) on a scale with the anchors of one corresponding to perfect health and zero to death. The most commonly used utility measure is probably the EuroQol-5D (EQ-5D), consisting of five questions, defining health in terms of mobility, usual activities, self-care, pain/discomfort, and anxiety/ depression.

In this issue of the *Journal,* Muszbek et al.[3] report a review of utilities after open and endovascular AAA repair. Ten studies met the inclusion criteria, including the EndoVascular Aneurysm Repair (EVAR)[2] and the Dutch Randomised Endovascular Aneurysm Management (DREAM)[1] trials. One technology appraisal prepared for the Ontario Ministry of Health & Long-term Care (referred to as the Ontario study[4]) was also analysed as it included an original study of utilities.

It should be emphasised that all studies were analysed qualitatively, because quantitative analysis was not possible due to variation in patient population, comparators, and type of utility measurements reported. The Short Form 36 (SF36), which includes a multi-item scale assessing eight health domains, was used in most studies. The SF36 rates quality of life but does not provide utility values.

The utility scores following open repair and EVAR varied significantly in the Ontario,[4] DREAM[1] and EVAR1[2] studies. The Ontario study was the most favourable for EVAR. The EVAR1[2] and DREAM[1] trials should be considered to provide a higher level of data than the Ontario cohort study since they were designed as randomised studies.

In the EVAR 1 trial,[2] the EQ-5D scores at baseline in both groups were similar to age and sex-matched population norms. Although the open repair group had a decreased HRQL at 0-3 months, by 3-12 months these had returned to baseline. At 12-24 months after randomisation, there was no significant difference between the groups. A deterioration of HRQL in the early period after open repair was also observed in the DREAM trial.[1] However, although no difference between the groups was reported in the EVAR 1 trial at 6 months, the DREAM trial reported a better HRQL following open repair at the same time interval. There was no clear demonstration that the need for continued surveillance in the EVAR group affects HRQL scores. In the EVAR 1 trial,[2] neither the SF36 nor the EQ-5D following open or endovascular surgery was reported to be different up to 2 years after randomisation. Thus it appears appropriate to conclude that based on current evidence endovascular and open techniques of AAA repair provide similar long-term quality of life.

As more experience is gained with EVAR techniques, lower complication and reintervention rates may result in higher utility scores. It is of paramount importance that any cost-effectiveness analysis of EVAR includes quality of life assessment through utility data, as these data will play a role in any nationally-sponsored health technology evaluation.

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