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Title **Care Strategy for Carotid Bifurcation Stenoses – Indications for Revascularization Techniques**

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Reference www.has-sante.fr/portail/display.jsp?id=c_554161,
www.has-sante.fr/portail/display.jsp?id=c_555900

Aim

To assess revascularization techniques (carotid surgery, carotid angioplasty, and stenting (CAS)) for carotid bifurcation stenoses; to specify their indications and contribution to the care strategy; to assess the practical procedures for performing CAS; and to assess the economic impact of these revascularization techniques.

Conclusions and results

Symptomatic atherosclerotic carotid stenoses. Surgery is the treatment of choice for tight symptomatic atherosclerotic carotid stenoses. It is indicated for stenoses of 50% to 99% (according to 2 randomized controlled trials (RCTs) – NASCET and ECST). It should be performed as soon as possible (within 2 weeks) in patients with a transient ischemic attack, or with moderate or regressive ischemic stroke.

The results of 2 European multicenter RCTs comparing surgery with CAS (EVA-3S and SPACE) did not demonstrate the non-inferiority of CAS compared with surgery in terms of 30-day mortality and stroke. Consequently, CAS is indicated only as a second-line procedure to be used when the surgeon decides that surgery is contraindicated on technical or anatomical grounds, or when a multidisciplinary group including vascular surgeons and neurologists considers that there is a risk related to the medical and surgical conditions (expert opinion).

Asymptomatic atherosclerotic carotid stenoses. Surgery is not indicated for asymptomatic stenoses of less than 60%. It is an option for stenoses greater than or equal to 60%, depending on several variables (life expectancy, hemodynamic and anatomical variables, and stenosis progression), and for surgical teams whose expected morbidity-mortality rate at 30 days is less than 3%. The benefit of surgery appears only in the long term (2 years) (RCTs ACAS and ACST and expert opinion).

No indication has been established for CAS in asymptomatic atherosclerotic carotid stenoses. Nevertheless, it may be considered in rare cases when carotid revascularization is deemed necessary (asymptomatic stenoses greater than or equal to 60%), once the surgeon has decided that surgery is contraindicated (expert opinion).

Radiation-induced stenoses and postsurgical restenoses of the carotid. Low-evidence-level studies have shown good results in terms of 30-day mortality and stroke for both CAS and surgery. In practice, the choice of treatment must be discussed by a multidisciplinary group including vascular surgeons and neurologists (expert opinion).

Methods

This assessment is based on a critical appraisal of the literature (systematic literature review using MEDLINE and Pascal databases published in French and English between 1997 and 2006) and the expert opinion of an 18-member multidisciplinary working group (neurologists, vascular surgeons, radiologists, cardiologists, anesthetists, vascular physicians, and health economists) and of 22 peer reviewers.

Further research/reviews required

A national register of carotid angioplasty and stenting procedures should be set up.

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