

Surgery and anaesthesia should cause no special problems for people with Sjögren's syndrome, provided that attention is paid to a number of specific points in addition to general aspects.

General evaluation of the risk of surgery

The first step is evaluation of the general risk of surgery, identical to the approach for otherwise healthy people. Based on the principles of evidence-based medicine, the preoperative evaluation of healthy patients should include:

- a screening questionnaire for all patients, see table 14.1; research has shown that no additional benefit is obtained from a complete history, physical examination, or laboratory studies in those patients who answered "no" to all of these questions.¹
- a history of exercise tolerance for all patients: the ability to walk two blocks on level ground or carry two bags of groceries up one flight of stairs

Table 14.1 Preoperative patient questionnaire ^{1,3}

1. Do you feel unwell?
2. Have you ever had any serious illnesses in the past?
3. Do you get any more short of breath on exertion than other people of your age?
4. Do you have any coughing?
5. Do you have any wheezing?
6. Do you have any chest pain on exertion (anginal type)?
7. Do you have any ankle swelling?
8. Have you taken any medicine or pills in the last three months (including excess alcohol)?
9. Have you any allergies?
10. Have you had an anesthetic in the last two months?
11. Have you or your relatives had any problems with a previous anesthetic?
12. Observation of serious abnormality from "end of bed" which might affect anesthetic?
13. What is the date of your last menstrual period?

Table 14.2 Guidelines for the use of routine preoperative ECGs ^{2,3}

- men older than 45 years
- women older than 55 years
- known cardiac disease
- clinical evaluation suggesting the possibility of cardiac disease
- patients at risk for electrolyte abnormalities, such as diuretic use
- systemic disease associated with possible unrecognized heart disease, such as diabetes mellitus or hypertension
- patients undergoing major surgical procedures.

without symptoms are simple questions that can give a rough assessment of patient risk;⁴ in general, healthy patients who can perform these activities have a low risk for major post-operative complications.

- blood pressure and pulse for all patients
- history and physical examination if one of the above is abnormal, in patients > 60 years, or in those undergoing major surgery
- pregnancy test for women who may be pregnant
- hematocrit for all patients undergoing surgery with expected major blood loss and for patients 65 years or older undergoing major surgery irrespective of potential for perioperative blood loss
- serum creatinine concentration if major surgery, hypotension is expected, nephrotoxic drugs will be used, or the patient is > 50 years
- ECG recommendations as shown in table 14.2, unless obtained within the previous month
- chest x-ray for patients > 50 years undergoing major surgery, or those with suspected cardiac or pulmonary disease, unless done within past six months
- all other tests only if the clinical evaluation suggests a likelihood of disease.

For more detailed professional information and background of evaluation of the general risk of surgery, it is strongly advised to read to the excellent chapter of Smetana in UpToDate.³

Additional measures for Sjögren's syndrome

Before admission into hospital

If you are taking medication which has an effect on blood clotting, *e.g.* anti-inflammatory agents such as aspirin and other NSAIDs (for example diclofenac, ibuprofen, naproxen), you should normally stop taking these 6 days (aspirin) or 3 days (other NSAIDs) before the operation (see box). For many surgical procedures it is not necessary anymore to stop low dose aspirine, except when there is a high risk of postoperative bleeding (liver and prostate surgery).

If you take corticosteroids on a daily basis, you should continue to take these, including on the day of the operation. Your specialist and the anaesthetist should be informed of this, because when you have a general anaesthetic the dose of corticosteroids needs to be increased during the day of the operation and for a few days afterwards (so-called "stress schedule").

Admission into hospital

It is advisable to take all medication you are currently using with you to the hospital. This particularly applies to artificial tears, artificial saliva and skin creams. In this way you will avoid having to wait a few days until the medication can be supplied by the hospital pharmacy.

The day of the operation

Make sure that you arrange with the anaesthetist to put drops regularly in your eyes throughout the operation so as to prevent damage caused by dryness of your eyes. Also ask the anaesthetist, when preparing you for the operation, not to give you atropine-like drugs intended to make the mucous membranes dryer during the operation. This is not necessary for Sjögren's patients and can cause severe symptoms or disorders after the operation.

If the operation can be done using epidural anaesthesia rather than a general anaesthetic, this would be preferable. However, the anaesthetist usually makes the proviso that a general anaesthetic may still have to be given should it prove necessary during the operation. It is therefore always advisable to discuss the fact that you have Sjögren's syndrome with the anaesthetist.

After the operation

If antibiotics are given in connection with the operation, there will be an increased risk of developing a fungal infection in the mouth. This generally causes a burning mouth with red mucosa and cracks in the corners of the mouth.

Myasthenia gravis

Patients with myasthenia gravis should discuss this health problem with the anaesthetist before the operation because some drugs used in the anaesthetic be harmful to people with myasthenia gravis. See also chapter 15.

Blood clotting and NSAIDs

NSAIDs have an anti-inflammatory effect by inhibiting the enzyme cyclo-oxygenase-2. Older NSAIDs also inhibit cyclo-oxygenase-1 and this is the reason for their damaging effects on the gastric mucosa and the function of platelets (see chapter 5).

The cox-1 effect on platelets is caused by inhibition of tromboxane. This leads to inhibition of thrombocyte aggregation (clumping together of platelets, necessary for blood clotting). Aspirin has the strongest effect of all the NSAIDs on tromboxane because the formation of tromboxane in platelets is irreversibly inhibited. In the case of other NSAIDs, recovery is possible once the NSAID has been stopped.

Platelets normally live for around 7-10 days and are continually replaced. Consequently, recovery of the function of platelets takes longer after the use of aspirin (7 days) than after other NSAIDs (3 days).

It is not necessary to stop taking anti-inflammatory agents that do not inhibit cox-1 before an operation. This applies to hydroxychloroquine, corticosteroids, colchicine and the new selective cox-2 inhibitors (see chapter 5, table 5.1). It may be wise to stop the latter group also because of their intrinsic increased risk on thrombosis.

References

1. Wilson ME, Williams MB, Baskett PJ, et al. Assessment of fitness for surgical procedures and the variability of anaesthetists' judgments. *Br Med J* 1980;1:509-12.
2. Goldberger AL, O'Konski M. Utility of the routine electrocardiogram before surgery and on general hospital admission. *Ann Intern Med* 1986;105:552-7.
3. Smetana GW. Preoperative medical evaluation of the healthy patient. UpToDate Version 16.3 (<http://www.utdol.com>)
4. Fleisher LA, Beckman JA, Brown KA, et al. ACC/AHA 2007 guidelines on perioperative cardiovascular evaluation and care for noncardiac surgery: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines *J Am Coll Cardiol* 2007;50:e159-241. PMID:17950140

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17.08.2009	conversion to another DTP program	