Anaesthesia and the Sleep Apnoea Sufferer

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Some thoughts for people with sleep apnoea who are preparing for surgery

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The author is NOT available, by any means of communication or at any time, for advice to individual patients about their health care. Such matters should be discussed with your own anaesthetist or other health care provider.

For the remainder of this document the term "anaesthetist" will be used to denote all types of anaesthesia provider as this is the term used in Australia for the only people who practice anaesthesia in this country, medical graduates with either full specialist anaesthesia training or, less commonly, general practitioners or dentists with additional training in the field of anaesthesia.

Summary

If you have sleep apnoea and you are planning to have surgery you should try to do the following if you possibly can....

- Discuss your apnoea and its implications with your surgeon *and especially your anaesthetist* well beforehand.
- Find out if you need to have extra tests before coming to hospital.
- Get as much information about your apnoea as you can (sleep study and other investigation reports, a letter from your sleep physician) and bring them with you.
- Get as much information about your previous anaesthetics as you can and bring this with you as well.
- Bring your CPAP or other appliance with you! Use it. Make sure the staff know how to use it.
- Ask your anaesthetist for a letter or note detailing any problems *or lack thereof* for future reference.

Please take the time to read the rest of the document. It explains these things in more detail and gives many more helpful suggestions. The URL is of this document is....

http://www.usyd.edu.au/anaes/lectures/OSApatinfo.html

Anaesthetic Considerations with Sleep Apnoea Patients

When you present for surgery that requires an anaesthetic, the anaesthetic would most likely be provided, funnily enough, by an anaesthetist! I know it's a hard word to say but if you say the first bit - "anaes" (pronounced "anees" by most people even though it's a diphthong) - and then add the rest - "thetist" - you'll be right. Some people want to change the name because so many have trouble saying it but I think that's going a bit far.

I digress.

Your anaesthetist would normally see you at some time prior to your operation. This might be the night before in your ward if you are admitted to hospital then. Increasingly, to save bed costs and so on, patients are either not admitted until the day of surgery or even have the operation as a "day-stay" procedure and the anaesthetist might see you in the day-stay ward although this is somewhat more difficult to organise for practical reasons. More commonly under those circumstances you won't meet your anaesthetist until you actually arrive in the operating suite. If this is so it may be that you have already seen another anaesthetist, who checked you over from an anaesthetic point of view, in a preoperative clinic of some sort. Whatever the case, unless it is a dire emergency, your anaesthetist would have some opportunity to consult with you about your medical history and so on prior to making any decisions about how your anaesthetic should be managed, although in most instances this consultation would take place no earlier than the evening before your operation. The relevence of this will soon become apparent.

Your anaesthetist will use the preoperative consultation to find out a number of things about you like your general health, the outcome of any previous anaesthetics you might have had and so on. S/he will also want to see the results of any relevent tests you might have had or, indeed, may require that certain tests be carried out before you can be anaesthetised and if these haven't been done already your surgery may be delayed. *Severe* sleep apnoea can be complicated by problems with the heart and lungs so it would not be unreasonable for your anaesthetist to expect that tests like an electrocardiogram (ECG or EKG) and a chest X-ray to have been done. If your anaesthetist suspects your apnoea is very severe and that your treatment is inadequate it is possible s/he may want you to see a sleep physician before surgery goes ahead. As you may have guessed these are not things you want to be finding out after you arrive in the operating suite or even the night before!

Another thing your anaesthetist will try to determine during the consultation is the likelihood that your airway will be difficult to manage after you are anaesthetised, something which is a bit more likely than usual if you have OSA. S/he will use this information to help decide what sort of anaesthetic is most appropriate for you. S/he may, for instance, advise you that it would be better to have local anaesthetic rather than a full general one, depending on the surgery, of course.

It is not uncommon for inpatients (much less so for day-of-surgery patients) to be given a sedative prior to their departure from the ward to the operating suite although many anaesthetists these days don't feel this is necessary. Some "experts" have advised against the use of sedative premeds in patients with sleep apnoea. Clearly this is something you should try to discuss with your anaesthetist and unless you are particularly anxious about your surgery I guess it probably wouldn't hurt to go without. If you are very nervous and you have your CPAP machine with you it doesn't really matter if you become sleepy so there are ways around this problem. In any case, most premeds don't make you go right off to sleep so I tend to order them anyway.

As I mentioned, the anaesthetist, normally after some discussion with you about the options, has to decide what sort of anaesthesia to use. This could be local anaesthetic injected into the area of the

surgery (usually only used for procedures on or near the surface of the body) or onto a major nerve or nerves supplying the area to be operated upon. The latter technique is called "regional" anaesthesia and includes such things as spinal or epidural blocks. Either of these local or regional techniques may be combined with some sedation. Certain not very painful procedures can sometimes be carried out using sedation alone. Then there is general anaesthesia where you are rendered unconscious for the surgery by drugs that are either injected through a "drip" or inhaled. Occasionally a regional technique will be combined with general anaesthesia and the regional (usually epidural) continued into the postoperative period for pain relief. Not all of these options will be available depending on such factors as the nature or duration of the surgery. Needless to say, both sedation and general anaesthesia interfere with your ability to maintain your own airway. That *doesn't* mean you shouldn't have these types of anaesthesia if you have sleep apnoea. Your anaesthetist should be very experienced at dealing with the airway! Having said that, there is a theoretical but unproven increase in the risk of airway problems with sleep apnoea patients. You might like to consider, therefore, and discuss with your anaesthetist the advisability of avoiding sedation if you are having either a local or regional technique. This may entail some additional, but usually brief, discomfort but you may prefer that to the theoretical risk of entrusting your obstruction-prone airway to another person.

Very rarely we get patients who we perceive to have such a risky airway that we choose to "secure" the airway before, rather than after, we render them unconscious. Securing the airway involves putting a tube down through the mouth or nose, through the vocal cords and into the trachea. This is called "intubation". Once this is done there is essentially no further risk of airway blockage and anaesthesia/surgery can proceed as normal. Awake intubation is normally done only after your throat has been sprayed with some local anaesthetic or otherwise rendered partly insensible and you have been given some sedation. It is nevertheless not what you would call fun. Obese patients with severe sleep apnoea would be one group where the inclination of the anaesthetist to do things this way is somewhat increased. If you fall into this group and you have already had a successful general anaesthetic without awake intubation being necessary, your anaesthetist would probably be less inclined to take this potentially unpleasant approach if you can provide to him/her some evidence of your prior experience, such as a note from the other anaesthetist.

Very obese patients are always more of a challenge to us as anaesthetists. Even simple things like taking the blood pressure and putting in a drip may be considerably more difficult. Maintaining the airway and ensuring adequate breathing is also more of a problem than usual. The end result is that obese folk can find the whole experience of surgery more unpleasant, perhaps requiring more attempts at getting needles in veins and the like, and also running quite a bit more risk of things going less than perfectly. I'm certainly not trying to be nasty to folks who are overweight but one of the best things you can do to improve your lot in hospital is to lose some! And while you're at it, quit smoking!

Another decision your anaesthetist has to make is what sort of pain relief you should have after your operation. If the surgery is minor, like a day stay procedure, you might not need much at all. Major surgery is a different ballgame. The traditional approach would be to get the nurses to give you an injection of an opioid (narcotic) drug like morphine whenever you complain of pain and this technique is still very widely used. More recently you might be offered the same drugs but via a different route, like through a vein, either by continuous drip or with a special pump with which you give yourself little amounts whenever you need it. This latter technique is known as patient controlled analgesia (PCA). Once you start drinking again after your operation, and if the degree of pain is not so bad, you could have strong opioid tablets that contain drugs like codeine or oxycodone. Most drugs used for all of these methods produce some sedation as well as pain relief. The more pain relief, the more sedation. This is what poses a problem for sleep apnoea patients.

Let's say, for instance, that you were planned to have a day-surgery procedure which would normally require you to take some of these strong tablets at home afterwards. Many anaesthetists would say that you should, in fact, stay in hospital the night after, instead of going home, because of the sedation these tablets might produce when added to the possible after-effects of the anaesthetic (pretty minimal these days). I don't think this makes sense if you are already well settled on effective CPAP or other sleep apnoea therapy. Very severe and inadequately treated apnoea might be a different matter. There are some who also suggest that all sleep apnoea patients should go to intensive care or similar after more major surgery. Again, I think it's alright to return to a general ward if your apnoea therapy is satisfactory and the ward staff are capable of assisting you with it.

Some forms of pain relief, like an epidural which blocks the pain impulses from getting to your brain, can give superb analgesia (like even no pain at all after major surgery!) and, at the same time, not produce any sedation. Sounds like just the thing for sleep apnoea patients! You need to be aware, however, that epidurals and the like have their own set of risks, mostly rare but potentially quite disastrous, and the relative merit of these techniques is the subject of some considerable controversy amongst the world anaesthesia community at the moment. Again, this is something you would need to discuss with your anaesthetist.

There are some types of surgery which require things to be left in your nose for a day or two afterwards. This could be a tube going down to your stomach if you've had an operation on your abdomen or some packs if you've had an operation on the nose itself. Needless to say, this can interfere with the efficacy of nasal CPAP and there isn't always a simple answer to the problem. If you think this situation might apply to you, you might want to discuss it with your sleep physician well before the date of your operation so that s/he can correspond with your surgeon and anaesthetist and perhaps come up with an alternative.

What can YOU do to help?

Before your surgery...

I might seem a little obtuse here but I have to repeat one of my earlier remarks....lose some weight (only if you have too much of it, of course) and quit smoking! If that's all I said for the rest of this document I still wouldn't be saying it enough. Have you got the message yet <grin>?

When you see your surgeon in his/her office and you decide to go ahead with surgery there are a few extra things you should ask him/her. As you might have already gathered, there are a few things you might want to discuss with your anaesthetist beforehand. This is hard to do unless you know who it's going to be! Ask your surgeon. In many countries, including Australia, the same surgeon and anaesthetist work together as a team doing the same list every week so the surgeon should be able to put you in contact with the anaesthetist. In other countries, like the USA I understand, the team isn't so regular so it would be more difficult. Also be aware that anaesthetists can be hard to track down as we often work in different hospitals from one day to the next. Be patient and persistent.

Another thing to bring up with your surgeon perhaps is the planned venue for your surgery. If I had severe sleep apnoea I wouldn't be volunteering to have anything more than minor surgery at a very small peripheral hospital. Go for the bigger one which would be more likely to have the resources to deal with sleep apnoea patients (this may require a trip to the city if you live rurally). Be aware that

insistence on this could create problems as your surgeon might not work at a major institution. I'll leave you to draw the logical conclusion.

The more information you can provide to your anaesthetist the better. To this end you should ask your sleep physician for copies of any relevent investigation reports, like those of your sleep and CPAP titration studies and, if you had one, that of your nasendoscopy (that's the thing where they put a little flexible telescope down your nose to examine your throat). Your sleep physician might also be willing to give you a letter stating the severity of your apnoea and mentioning any other medical problems associated with it. No harm in asking. And don't forget to bring these with you to the hospital. They aren't much good in a drawer at home!

Have you already had an anaesthetic? Information about previous anaesthetics is the most valuable information your next anaesthetist can get! If it was carried out in the same hospital then you are in luck. There should be a record of the anaesthetic in your case notes. If not, try to get a copy of your anaesthetic record from the other hospital so you can bring it with you. Be aware that many hospitals will not be prepared to release them as they are considered to be confidential medico-legal records. One way around this is to arrange for a copy to be sent directly to your prospective anaesthetist. Hospitals are much more likely to be agreeable to this. Another alternative, if you can track him/her down, is to ask your previous anaesthetist to write a note detailing any problems, *or lack thereof*, s/he encountered with your anaesthetic. Again, you might have to be patient and persistent.

As I mentioned, if at all possible, you should ring your anaesthetist well before time. This will give you the opportunity to provide him/her with the information you have and at the same time to voice any concerns. You can discuss your options and, if necessary, take some time to consider them. Tell him/her what tests/medical consultations you have had and ask if you should have any more prior to coming into hospital as this will avoid delays. The other thing to do is to ask him/her to make a note of any difficulties s/he has with your anaesthetic. I have already mentioned why this is important. You should be quite insistent about this if necessary. It is your right to be given this information.

Don't forget to bring your CPAP or appliance to hospital! There are stages both before and after your operation when you might not be capable of applying the CPAP yourself so make sure all the relevent people know how to use it. This includes the ward nursing staff, the recovery room staff, and your anaesthetist. Remember that day and night become quite blurred in hospital so if you are feeling sleepy, whatever time it happens to be, use your CPAP.

I don't think this is an issue in Australia (maybe more likely in the US) but some hospitals require any equipment like CPAP machines to be checked by their biomedical engineers for compliance. If this is necessary, make sure it happens as soon as you are admitted.

And after...

Ask for a copy of the anaesthetic record for future reference but again, most hospitals will not allow this. Remind your anaesthetist to give you a letter about your anaesthetic, including a description of any problems. Do not be satisfied with a verbal statement that there weren't any. A written record of the technique used and the *lack* of any difficulty is just as important as one noting that there was a problem! You may need to call your anaesthetist to get this as many do not, unfortunately, carry out post-operative visits. Again, you may need to be persistent. I would go so far as to suggest that you don't pay the bill until you get it as I consider this to be a most important part of the care for which you are paying. Keep it safely and bring *a copy* with you should you require further surgery.

Some other stuff

All of this is very nice if you are having elective surgery. How is anyone going to know you have sleep apnoea in an emergency? Consider getting some form of identification like a Medic-Alert bracelet. You might also carry copies of relevent documents (like the letter fom the anaesthetist!) in your wallet.

There are some other internet resources you might want to look at....

- Phantom Sleep Resources has a document written by Dave Hargett, based on notes taken during a talk by Dr John Palmeri in the USA, about Anesthesia and the Apnea Patient. In most respects the opinion contained therein is similar to mine.

- There is a sleep apnoea section in my Respiration Chapter of the Virtual Anaesthesia Textbook. It contains links to a variety of resources specifically for anaesthetists on the topic of sleep apnoea as well as some general resources.