

aspirin, and frusemide. The patient returned to Hong Kong for surgical removal of "atrial myxoma" in one of the private hospitals. During operation, routine cardiac monitors included electrocardiography, intra-arterial cannula, and multilumen central venous catheter. After induction of anaesthesia (high-dose fentanyl, midazolam, thiopentone, and pancuronium), the systolic BP shot up from 145 to 220 mm Hg, while the heart rate increased from 100 to 120 beats per minute (bpm). This was controlled with boluses of propofol. The surgeon proceeded with sternotomy and aortic cannulation after systemic heparinisation. During right atrial manipulation, the BP again rose above 250 mm Hg requiring nitroprusside, propranolol, and phentolamine, which lowered the BP to the 130 mm Hg range. The possibility of a catecholamine-secreting tumour was contemplated. Nevertheless, after right atrial cannulation the patient was quickly put on cardiopulmonary bypass. The perfusion pressure was maintained at about 60 mm Hg without further vasodilator therapy. Right atriotomy showed no tumour. However, a whitish tumour mass measuring 3 cm x 4 cm was found adherent to the exterior right atrial surface and was resected. The atrial wall remained intact, and the patient was taken off bypass smoothly with minimal dopamine. The post-operative BP was 110 to 120 mm Hg with a junctional rhythm of 50 to 60 bpm. Pathological diagnosis was

paraganglioma. The normalisation of BP after atrial cannulation was thought to be due to isolation of the tumour from systemic circulation.

There have only been anecdotal reports of cardiac pheochromocytoma,^{4,5} and my patient might be the first in Hong Kong.

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Improvement of adenoidectomy for childhood snoring

We read with interest the report "Endoscopic-guided adenoidectomy using a classic adenoid curette: a simple way to improve adenoidectomy" by Wan et al.¹ We agree with the authors that endoscopic-guided adenoidectomy is an improvement over traditional adenoidectomy. However, the indication for adenoidectomy is not clear from the study. The suspected obstructive sleep apnoea (OSA) cases in their series remained suspected, as they were not confirmed by overnight polysomnography. This is highly unsatisfactory as the visual analogue scale used in their study is not a validated tool for screening childhood OSA. The OSA-18 questionnaire (Table) is a better tool to assess the impact of sleep-disordered breathing.² Children who undergo adenotonsillectomy should be closely monitored as the rate of postoperative complications in severe OSA patients has been reported as high as 25%.³ It is not clear from Wan et al's series what kind of postoperative

monitoring was implemented to justify the statement: "All of the patients did not have any postoperative complications".

Further, in order to identify the site(s) of obstruction, we suggest that polysomnographically confirmed OSA patients undergo flexible endoscopic assessment of the upper airway during spontaneous breathing while in an induced sleep state. This approach was shown by Guillemineault et al⁴ to improve the overall long-term treatment effect. The importance of sleep endoscopy was best illustrated by case 2 in Wan et al's series, as the enlarged adenoid was missed by the first palpating surgeon.

In Wan et al's series, four children had only adenoidectomy without tonsillectomy. The reason for this omission is not clear from the report. The impact of the tonsils on the airway is likely to be

Table. Obstructive sleep apnoea syndrome quality-of-life survey (OSA-18)²

For each question below, please circle the number that best describes how often each symptom or problem has occurred during the past 4 weeks. Please circle only one number per question. Thank you.							
	None of the time	Hardly any of the time	A little of the time	Some of the time	A good bit of the time	Most of the time	All of the time
Sleep disturbance							
During the past 4 weeks, how often has your child had...							
...loud snoring?	1	2	3	4	5	6	7
...breath-holding spells or pauses in breathing at night?	1	2	3	4	5	6	7
...choking or made gasping sounds while asleep?	1	2	3	4	5	6	7
...restless sleep or frequent awakenings from sleep?	1	2	3	4	5	6	7
Physical symptoms							
During the past 4 weeks, how often has your child had...							
...mouth breathing because of nasal obstruction?	1	2	3	4	5	6	7
...frequent colds or upper respiratory infections?	1	2	3	4	5	6	7
...nasal discharge or a runny nose?	1	2	3	4	5	6	7
...difficulty in swallowing foods?	1	2	3	4	5	6	7
Emotional symptoms							
During the past 4 weeks, how often has your child had...							
...mood swings or temper tantrums?	1	2	3	4	5	6	7
...aggressive or hyperactive behaviour?	1	2	3	4	5	6	7
...discipline problems?	1	2	3	4	5	6	7
Daytime function							
During the past 4 weeks, how often has your child had...							
...excessive daytime sleepiness?	1	2	3	4	5	6	7
...a poor attention span or concentration?	1	2	3	4	5	6	7
...difficulty getting up in the morning?	1	2	3	4	5	6	7
Caregiver concerns							
During the past 4 weeks, how often has the problems described above...							
...caused you to worry about your child's general health?	1	2	3	4	5	6	7
...created concern that your child is not getting enough air?	1	2	3	4	5	6	7
...interfered with your ability to perform daily activities?	1	2	3	4	5	6	7
...made you frustrated?	1	2	3	4	5	6	7

underestimated when there is an absence of spontaneous breathing as is the case during general anaesthesia. In our opinion, it is unwise to leave the tonsils intact in any children with OSA or snoring, unless the tonsils are not there at all, in view of the fact that airway resistance is inversely proportional to at least the fourth power of the diameter of the airway.

In conclusion, it is important to make a definitive diagnosis for children with snoring. Adenotonsillectomy is only a part of the surgical treatment, which could include treatment of nasal septal deviation, hypertrophic nasal turbinate, micrognathia, and high arch palate. Furthermore, surgical intervention is but a part of the overall management of OSA, which also includes treatment of allergic rhinitis, avoidance of sleep deprivation, and management of obesity. A multidisciplinary approach that includes a paediatric sleep specialist, a cardiologist, an endocrinologist, an ear, nose and throat surgeon, an oral surgeon, and an orthodontist is important to tackle OSA in children comprehensively. Unfortunately, Hong Kong is found wanting in this area.

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Answers to CME Programme *Hong Kong Medical Journal* April 2005 issue

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I. Surgical intervention for benign prostatic hyperplasia in Hong Kong

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|---|----------|----------|----------|----------|----------|
| A | 1. True | 2. True | 3. False | 4. False | 5. False |
| B | 1. True | 2. False | 3. False | 4. False | 5. True |
| C | 1. False | 2. True | 3. True | 4. False | 5. False |

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II. Causes of childhood blindness in a school for the visually impaired in Hong Kong

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|---|----------|----------|----------|---------|---------|
| A | 1. False | 2. False | 3. True | 4. True | 5. True |
| B | 1. False | 2. True | 3. False | 4. True | 5. True |
| C | 1. True | 2. True | 3. False | 4. True | 5. True |