UNIT NO. 1

THE BURDEN OF ASTHMA IN SINGAPORE

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ABSTRACT

Singapore is ranked as an intermediate risk country for asthma prevalence (Clinical asthma prevalence of 4.9%) but a very high risk country for asthma deaths (Asthma related mortality rates of 0.6-0.8 /100.000 pop 5-34 yrs of age). Since asthma is an eminently treatable disease and thus, asthma deaths are mostly preventable, this data suggest that asthmatics in Singapore are not managed as well as those many other countries. We have, in recent years, seen a gradual shift over from a primary focus on the rescue treatment of acute exacerbations to optimizing long term disease control and prevention of relapses. And we are already beginning to see a growing demand for this approach from the patients themselves. We hope that this will become the new standard of care for asthma in Singapore.

Prevalence and mortality

On World Asthma Day 2004, the WHO released their report on global asthma burden (http://www.ginasthma.com/). Singapore is ranked as an intermediate risk country for asthma prevalence (Clinical asthma prevalence of 4.9%) but a very high risk country for asthma deaths (Asthma related mortality rates of 0.6-0.8 /100.000 pop 5-34 yrs of age). Since asthma is an eminently treatable disease and thus, asthma deaths are mostly preventable, this data suggest that asthmatics in Singapore are not managed as well as those many other countries.

How can we reduce the burden of asthma in Singapore?

By learning management skills and practicing treatment methods more appropriate for a chronic relapsing disease rather than for an episodic relapsing illness. And teaching them more effectively to our patients and other clinic team members (Table 1). By stopping those treatment methods which are less effective or potentially risky to patients (Table 2). And by practicing those treatment methods which are more cost effective and evidence based to achieve better long term asthma control and lower relapse rates (Table 3). This will also help to the reduce habit of "doctor shopping" and ensure that clinics which practice better quality long term care also enjoy better patient loyalty.

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One reason for the widespread under treatment of asthma is that persistent low grade disease symptoms are usually under recognized by patients and hence go undetected and untreated by doctors (use a check list for all patients at every visit). The other reason is that both patients and doctors may be reluctant to take the extra effort to learn new coping habits for a problem which may come and go over many months and years. The fear of using "expensive" long term treatment and risk of side effects is another barrier to better asthma care. The current stepped strategy of using low dose inhaled steroids followed by adding on long acting beta agonists ensure best cost-effectiveness both with regards to expenditure and side effects. This new long term cost savings plan should be explained to patients at the very beginning of therapy.

CONCLUSION

We have, in recent years, seen a gradual shift over from a primary focus on the rescue treatment of acute exacerbations to optimizing long term disease control and prevention of relapses. And we are already beginning to see a growing demand for this approach from the patients themselves. We hope that this will become the new standard of care for asthma in Singapore. Ultimately, both doctors and patients will benefit from this more appropriate style of asthma care.

Table 1

What can we do to reduce this burden?
1. Stop treating asthma as an acute episodic illness
2. Learn skills appropriate for the management of asthma as a persistently relapsing disease
3. Teach them to our clinic team members
4. Teach them to our patients (& families)

Table 2

What should we stop prescribing/practicing		and switch over to?
1. Oral salbutamol & other broncho-dilators	A	Inhalational treatment
2. MDI quick relief as core treatment for asthma	A	Preventors
3. Episodic rescue treatment as the focus of care	A	Daily preventors
4. Home nebulizers (especially in adults)	A	Written Asthma Action Plans
5. Oral prednisolone regimes: Low dose & tailing	A	High dose & stop with no tail

Table 3

What skills should we acquire and practice?

Diagnostic skills

1) Lower our detection threshold for persistent & poorly controlled asthma
   (a) Persistent asthma = Need to use quick reliever > 1x per week daytime and/or > 1x per 2 weeks night time *
   (b) Poor control = Nebulization and/or oral steroids for severe acute attacks > 1x per year *

* These patients need daily long term treatment with preventor medication

2) Use the GINA/MOH CPG (01/2002) check lists

Communication skills

i. Get patients to change/stop old coping habits
   e.g. primary reliance on quick relief medications, seeing doctors prn

ii. Get patients to learn new self management skills
   (a) Good proficiency with inhalers
   (b) Early self detection of emerging exacerbations
   (c) Prompt and effective self management with action plans
   (d) Regular clinic reviews even when they are well

iii. Similarly for other team members in the clinic

iv. Make people stick to these new habits
   (a) e. g. give fixed appointments
   (b) review no shows & institute a patient reminder/recall plan
   (c) point to the "daily use of preventers saves lives" stickers on packs

Pharmaco-therapeutic skills

(a) Practice the stepped approach to using inhaled steroids + long acting beta agonists
(b) Be pro active in addressing uncertainties, fears, costs & side effects
(c) Take new/extra steps to improve long term adherence
(d) Look out for and overcome other barriers

Administer Written Asthma Action Plans

Administer & teach & re-enforce action plans for future disease exacerbations in all patients.

LEARNING POINTS

- **Asthma deaths in Singapore are much higher then expected .**
- **We need to lower our threshold for the detection of persistent and/or poorly controlled asthma.**
- **We need to shift our emphasis from acute rescue treatment to long term control of asthma.**
- **The new management tools are check lists, a stepped strategy from low dose to combination drugs and written action plans.**
- **This method of management is designed to be, in the long term, both more effective and less expensive than exclusive reliance on rescue treatment.**