

Characteristics Sinusitis of out Patients ENT Clinic in Sanglah Hospital, Period January to December 2014

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ABSTRACT

Sinusitis is a very common disease in Indonesia. Indonesian Health Department in 2003 mentioned that nasal and sinus disease is in 25th of 50 major diseases or about 102,817 outpatients in hospitals. Data from the Division of Rinology of ENT Department of RSCM from January to August 2005 as many as 435 patients or about 69% (300 patients) are sinusitis. Knowing the characteristics of sinusitis patients is very helpful for health professionals in making diagnosis and treatment plan for sinusitis patient. However, epidemiological data concerning sinusitis patients in Bali, especially Denpasar is not yet available. It is because of this background that further attention is needed regarding the characteristics of sinusitis patients in Denpasar, especially at Sanglah Denpasar General Hospital (RSUP) from January to December 2014. Descriptive study with retrospective approach, using medical record data of sinusitis patient who went to THT-KL Hospital Sanglah Hospital from January to December 2014. Total of 106 sinusitis patients from January to December 2014. Total 106 sinusitis patients in ENT policlinic Sanglah Hospital Denpasar in the period January to December 2014 were included in this study. We divided the patients into 2 groups based on the cause of sinusitis, Rhinogenic (89 patients) and odontogenic (17 patients) while most of the patients is male as many as 64 patients (60,4%). The most common sinus affected in sinusitis is maxillary sinus as many as 80 patients (75,5%) in rhinogenic sinusitis and as many as 17 patients (16%) in odontogenic sinusitis. The most common onset of sinusitis is chronic in both of the group, as many as 48 patients (45,3%) in rhinogenic and as many as 12 patients (11,3%) in odontogenic. The most common complain of the patient is rhinorea in rhinogenic group as many as 72 patients (80,9%), while all the patient in odontogenic group are complaining of toothache.

Keywords: sinusitis, rhinogenic, odontogenic.

INTRODUCTION

Sinusitis is a very common disease in Indonesia. Researchers from Norway suggest sinusitis incidence of 3.5 per 100 cases in adults with 7% of patients having two visits and 0.5% having three or more visits over one year. In America,

the incidence of sinusitis is around 20 million people per year with 18 million people undergo examination (Posumah, et al, 2013). Indonesian Health Department in 2003 mentioned that nasal and sinus disease is in 25th of 50 major diseases or about 102,817 outpatients in hospitals. Data



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from the Division of Rinology of ENT Department of RSCM from January to August 2005 as many as 435 patients or about 69% (300 patients) are sinusitis. (Posumah, et al, 2013)

Sinusitis can be divided according to acute infection (less than 4 weeks), subacute (4 to 8 weeks), chronic (more than 8 weeks) and recurrent (three or more acute episodes a year) (Leung, et al, 2008). Knowing the characteristics of sinusitis patients is very helpful for health professionals in making diagnosis and treatment plan for sinusitis patient. However, epidemiological data concerning sinusitis patients in Bali, especially Denpasar is not yet available. It is because of this background that further attention is needed regarding the characteristics of sinusitis patients in Denpasar, especially at Sanglah Denpasar General Hospital (RSUP) from January to December 2014.

METHOD

This is a descriptive study with retrospective approach, to find out the characteristic of sinusitis patients at Sanglah Hospital, Denpasar. The data was collected from medical records of the outpatients from January to December 2014 of ENT Polyclinic Sanglah Hospital, Denpasar. All patients with sinusitis within the period were included in this study (total sampling), with exclusion criteria is incomplete medical record. The samples then divided into two groups, based on the cause of sinusitis, rhinogenic (if it is caused by nasal obstruction), and odontogenic (if the infection is spread from the oral cavity, mostly from the teeth). Further data were tabulated and presented descriptively in tables and narrative.

The diagnosis of sinusitis is based on the

Table 1: Distribution of sinusitis patients based on age

Age group (y.o)	N	%
0-15	27	25.5
16-30	34	32.1
31-45	21	19.8
46-60	20	18.9
>60	4	3.8
Total	106	100

anamnesis, physical examination, and supporting examination. The patient is strongly suspected of having rhinosinusitis if it meets two major symptoms or one major and two minor symptoms or if there is a purulent secretion on nasal endoscopy examination. Patients who met only one criterion of major symptoms or two minor criteria were suspected of rhinosinusitis. Criteria for major rhinosinusitis symptoms include facial pain, nasal congestion, thick snot, purulent post nasal drip, disorders of smell, fever, purulent secretions on nasal endoscopy examination. Criteria for minor symptoms include headache, bad breath, cough, ear pain, full sense in the ear. Intranasal examination found hyperemic nasal mucosa, congested or hypertrophy nasal turbinates, mucoid/purulent nasal secretion, nasal polyp can be found, septum deviation. Oral cavity examination is done to evaluate to see dental abscess.

Sinus examination is done using palpation. The pain on acute rhinosinusitis is characterized by stabbing or localized pain on the affected sinus. X-ray radiography in Water's position and CT scan is done to confirm the diagnosis.

Sinusitis is divided into acute and chronic with the time limit is 12 weeks. It is said to be acute if the infection is less than 12 weeks, and chronic if the infection is more than 12 weeks.

RESULT

Total 106 sinusitis patients in ENT polyclinic Sanglah Hospital Denpasar in the period January to December 2014 were included in this study. We divided the patients into 2 groups based on the cause of sinusitis, Rhinogenic (89 patients) and odontogenic (17 patients). Based on table 1, most of sinusitis patients are in the age group of 16-30

Table 2: Distribution of sinusitis patients based on sex

Sex	N	%
Male	64	60.4
Female	42	39.6
Total	106	100

years old as many as 34 patients (32,1%), and the least is on the age group of >60 years old as many as 4 patients (3,8%).

Table 2 shows most of sinusitis patients is male as many as 64 patients (60,4%).

Based on table 3, the most common sinus affected in sinusitis is maxillary sinus as many as 80 patients (75,5%) in rhinogenic sinusitis and as many as 17 patients (16%) in odontogenic sinusitis.

Table 4 shows that the most common onset of sinusitis is chronic in both of the group, as many as 48 patients (45,3%) in rhinogenic and as many

as 12 patients (11,3%) in odontogenic.

The most common complain of the patient is rhinorea in rhinogenic group as many as 72 patients (80,9%), while all the patient in odontogenic group are complaining of toothache as seen on table 5.

DISCUSSION

Based on this study, it was found that most of sinusitis patients is in the group of 16-30 years old as many as 34 patients (32,1%), and the least is on the age group of >60 years old as many as 4 patients (3,8%). This data is in accordance with

Table 3: The distribution of sinusitis based on the affected sinus

	Rhinogenic	Odontogenic	Total
Maxillary	80 (75.5%)	17 (16.0%)	97(91.5%)
Ethmoidal	6 (5.7%)	0 (0%)	6 (5.7%)
Frontal	2 (1.9%)	0 (0%)	2 (1.9%)
Sphenoidal	1 (0.9%)	0 (0%)	1 (0.9%)
Total	89 (84.0%)	17 (16.0%)	106 (100%)

Table 4: The distribution of sinusitis based on the onset of disease

	Acute	Chronic	Total
Rhinogenic	41 (38.7%)	48 (45.3%)	89 (84.0%)
Odontogenic	5 (4.7%)	12 (11.3%)	17 (16.0%)
Total	46 (43.4%)	60 (56.6%)	106 (100%)

Table 5: The distribution of sinusitis based on chief complain

	Rhinogenic	Odontogenic
Rhinorea	72 (80.9%)	13 (76.5%)
Nasal obstruction	55 (61.8%)	14 (82.4%)
Coughing	22 (24.7%)	3 (17.6%)
Toothache	0 (0%)	17 (100%)
Headache	20 (22.5%)	4 (23.5%)
Fever	14 (15.7%)	0 (0%)
Facial pain	25 (28.1%)	5 (29.4%)
Phantosmia	10 (11.2%)	4 (23.5%)

previous study by Keumala (2011) conducted in RS H. Adam Malik Medan that the highest age group of patients is in the age group of 16-30 years as many as 135 patients (32.2%). While the lowest age group is in the age group >61 years, as many as 25 patients (6.0%). From the data above can be seen that the incidence of sinusitis is most common in young adulthood, which is likely because doing a lot of activities outside the home and often exposed to pollutants (Multazar, 2011).

Most of sinusitis patients is male as many as 64 patients (60,4%). This data is in line with the study of Yopa (2006) conducted at Santa Elisabeth

Hospital, the proportion of male (57.8%) is higher than female (42.2%) with sex ratio 1.4: 1. However, in contrast to Arivalagan et al (2011) study conducted at Adam Malik Hospital Medan, the highest number is female as many as 103 people (54.2%) compared to male, which is 87 people (45.8%). Differences in the study results could be caused by several factors such as population distribution, environment, and poor general health (Dhingra, 2010).

On this study found the most common sinus affected in sinusitis is maxillary sinus as many as 80 patients (75,5%) in rhinogenic sinusitis and as many as 17 patients (16%) in odontogenic sinusitis. The structure of the maxillary sinus anatomy is the largest and most susceptible to sinus drainage disorder, allowing infection by pollutants, viruses and bacteria (Keith, Anne 2013). According to Dhingra (2000) dental infections occur to the maxillary sinus, where sinus infections often originate from upper molar infections.

The most common complain of the patient is rhinorea in rhinogenic group as many as 72 patients (80,9%), while all the patient in odontogenic group are complaining of toothache. This is in

accordance with Sambuda (2008) which says the cause of odontogenic sinusitis is teeth disorder and the most common is upper molar infection.

CONCLUSION

From study conducted on the characteristics of sinusitis patients at Sanglah Denpasar Hospital from January to December 2014, we can conclude :

1. Most patients is in the age group of 16-30 years old and least is in the age group of >60 years old and mainly affecting male than female.
2. The most common type is maxillary sinusitis with the most common complaint is rhinorrhea in the group of rhinogenic and toothache in the odontogenic group.
3. The onset are mostly chronic.

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