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Perianal Condyloma Acuminata: Factors that Contribute to the Recurrence

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Abstract

Introduction. Condyloma Acuminata (CA) is the most common sexually transmitted disease caused by HPV with high recurrence rate up to 70%. Factors contribute to the recurrence such as age, site of predilection, previous treatment, HIV infection and sexual behavior were noted in perianal CA. To date the correlation of these factors to the recurrence remains unknown.
Method. A cross sectional study was conducted. Patients with history of CA managed in clinic of surgery during period of January 2010 to June 2015 were reviewed. Subject characteristics, i.e. age, infected site, previous treatment, HIV infection and sexual behavior and recurrence were the variables of the study. Data collected from medical record were statistically analyzed. Significant correlation found if p value <0.05.
Results. There were 48 subjects with the history of CA. On the analysis, age variable has a significant correlation with the recurrence p = 0.008 (OR = 5.83; 95% CI 1.66–20.56;). The recurrence was higher in productive age compared to non–productive age. Previous anal CA and high risk negative sexual behavior showed a higher recurrence risk than previous non–anal CA and positive sexual behavior (OR = 1.89 and 2.14, respectively).
Conclusion. There was significant correlation between age and CA recurrence, anal CA and negative sexual behavior showing 1.89 and 2.14 times, respectively more likely to have recurrence (New Ropanasuri J Surg.2018;3(2):e218).

Keywords: *perianal condyloma acuminata, recurrence, age*

Introduction

Condyloma Acuminata (CA) is the most common sexually transmitted disease caused by human papilloma virus (HPV) in the world. CA has a wide variation of predilection area including vulva, perineum, perianal, vagina, cervix, penis, anus, scrotum and urethra. The most types of infecting virus are HPV type 6, 11, 16, and 18. Those infected with type 6 and 11 frequently encountering a benign lesion, while as those infected with type 16 and 18 mostly shows the lesion of malignancy.[1] Each year, in the United States 5.5 million of population diagnosed with CA, at dr. Cipto Mangunkusumo General Hospital (RSCM), CA documented as the most common sexually transmitted disease with the prevalence of 21.25–33.66% in 2007–2011. However, in 2012, there were 81 new cases documented of a total 343 cases with CA. At dr. Soetomo General Hospital, Surabaya, there were 67 new cases in 2003 and 75 new cases in 2005. At H. Adam Malik General Hospital, Medan, in 2009 CA contributed of 29.9% of documented sexually transmitted disease.[1–4]

CA is not a fatal disease and may resolve with no medication; which is a self–limiting disease in nature. The treatment of options was found in a vary. Surgical intervention including excision, electrocauterization, cryotherapy, and laser surgery. Non–surgical therapy including podophyllin, podophyllotoxin, trichloroacetic acid, chemotherapeutic agent, or immunotherapy, should be completed with surgical intervention as the gold standard of treatment. However, CA remains a problem with high recurrence rate, of which ranged of 4.6–70%. Recurrent perianal CA is a risk factor of colorectal cancer. Studies showed that recurrent perianal CA has a higher standardized incidence ratio (SIR) to have colorectal cancer.[3,5,6] Efforts addressed to reduce the recurrence should include the education focused on these risk factors.

To date, the risk factors that contribute to recurrent perianal CA remains of little known. This entity frequently found in population of sexually active, particularly in a negative way such as in homosexuality. Subject of HIV with low CD4 level were those prone to have CA and those with incomplete treatment. Thus, eradication of HPV of infected tissue is the most important.[7] This study purposed to find out correlation of age, predilection of Previous CA, HIV infection, previous treatment, and sexual behavior with the incidence of recurrent perianal CA.

Method

A cross–sectional study conducted in RSCM in period of January to May 2016. Subjects with perianal CA managed in clinic of surgery dr. Cipto Mangunkusumo General Hospital (RSCM) between 1 January 2010 to 30 June 2015 were reviewed. All subjects were enrolled on the study, while as those with incomplete data and unwilling to participated were excluded. Data collected from medical record and interview. Specific potential subjects were contacted by phone; should they're willing to participate. Subject characteristics, age, recurrence of CA particularly recurrent perianal CA, previous CA location, previous treatment, HIV infection and CD4 level, and subject's sexual behavior consist of high– and low risk.
The analysis of this study proceeded using chi–square to find out correlation between the variables, which was significant as p value less than 0.05 with 95% confidence interval.

Committee of ethic Faculty of Medicine, Universitas Indonesia approved the study No 564/UN2.F1/ETIK/2016.

Results

A total of 50 subjects were enrolled in this study. However, two subjects were loss of follow up let only 48 subjects were analyzed. Out of 48 subjects, 28 subjects (58.3%) were documented to have recurrence. Characteristics of all the 48 subjects is shown in table 1.

Table 1. Subject characteristics

Variables		n	%
1.	Gender		
	– Male	23	47.9
	– Female	25	52.1
2.	Age (yrs.)		
	– <20	12	25
	– 20–39	26	54.2
	– >39	10	20.8
3.	Previous site of predilection		
	– Anal	26	54.2
	– Non–anal	22	45.8
4.	Treatment		
	– Surgical	47	97.9
	– Non–surgical	1	2.1
5.	HIV		
	– Positive	29	60.4
	– Negative	19	39.6
6.	CD 34		
	– ≥350	20	41.7
	– <350	28	58.3
7.	Marital status		
	– Married	23	47.9
	– Unmarried	25	52.1
8.	History of use no protection		
	– Yes	41	85.4
	– No	7	14.6
9.	Partner		
	– Heterosexual	25	52.1
	– Homosexual	16	33.3
	– Bisexual	7	14.6
10.	Sexual intercourse		
	– Anal	26	54.2
	– Anal and vaginal	22	45.8
11.	Recurrence		
	– Yes	28	58.3
	– No	20	41.7

Table 2. Data analysis

Variables	Recurrent	Resolve	OR	95% CI	p
1. Age					
– 20–39	20 (76.9%)	6 (23.1%)	5.83	1.66–20.56	0.008*
– <20 or >39	8 (36.4%)	14 (63.6%)			
2. Previous site of predilection					
– Anal	17 (65.4%)	9 (34.6%)	1.89	0.59–6.04	0.381
– Non–anal	11 (50.0%)	11 (50.0%)			
3. Treatment					
– Surgical	28 (59.6%)	19 (40.4%)	0.00	0.00	0.417
– Non–surgical	0 (0%)	1 (100%)			
4. CD 34 count					
– <350	15 (53.6%)	13 (46.4%)	0.62	0.19–2.02	0.555
– ≥350	13 (65.0%)	7 (35.0%)			
5. Sexual intercourse					
– Low risk	13 (50.0%)	13 (50.0%)	2.14	0.66–6.98	0.203
– High risk	15 (68.2%)	7 (31.8%)			

The only variable showed significant correlation was age (p = 0.008), other variables showed no significant correlation nor association.

Discussion

The study shows a significant correlation a variable of age with perianal CA recurrence. Reproductive age of 20–39 years old referred to a risk factor in the recurrence (OR 5.83; 95% CI 1.66–20.56), meanings people at the reproductive age have the chance of 5.83 times more likely to have recurrence compared to the other group age.

This finding is different to a study in Korea (2011), showing that age has no significant correlation to the recurrence. This might be caused by other approach of age grouping, where as in the study we divided the subjects into reproductive age (20–39 years) and non–reproductive age (<20 years, or, >39 years).[8–10] Previous site of predilection shows no significant association to CA recurrence (p = 0.381). However, anal CA showed a higher risk to re–occurrence than other location (OR 1.89; 95% CI 0.59–6.04). To date, no a single published article found indicating association of Previous CA site or predilection with recurrence. Zhang et al found that perianal CA showing the highest incidence of recurrence (30.23%) compared to the other sites.[11]

In the study also showed that previous treatment shows no significant association to the recurrence (p = 0.417); only a subject (2.1%) underwent non–surgical treatment with no recurrence. It is impossible to find a conclusion with such kind of data in the study, while as previous studies showed subjects who underwent surgical treatment have recurrence rate of 19–22% compared to 6–65% in subjects who underwent non–surgical treatment. The recurrence rate in non–surgical treatment was found in vary between options.[1,11,12]

In this study, CD4 level showed no correlation with recurrence (p = 0.555). However, the role of low CD4 count as a risk factor in the recurrence (OR 0.62; 95% CI 0.19–2.02) is not shown. This finding is found differed to a study in Korea showing significant correlation of mean CD4 count within 6 months after surgery with CA recurrence (p = 0.023). The possible cause of such a different may be due the cutoff of point used in this study. The cutoff level used in this study was 350, because at the level below patients are more prone to be infected with opportunistic microorganisms.[13] Negative sexual behavior defined as those having more than one sexual partner, homosexual or bisexual, and other deviations in addition to no protection was used during sexual activity. In the study, it was no significant correlation with CA recurrence (p = 0.203). What we found was, this negative sexual behavior showing the risk of 2.14 (95% CI 0.66–6.98) times is more likely to have recurrence. The study in Iran showed that CA incidence is higher in sexually active people, who had more than one sexual partner. While as a study of Neme et al in Kenya found that the CA incidence is higher in homosexual.[14–15]

Conclusion

Age has a significant correlation with CA recurrence, which is higher in reproductive age. Other known risk factors namely sites of predilection, previous treatment, HIV infection, low CD4 count and negative sexual behavior shows no significant correlation with CA recurrence in this study. While as, previous treatment was unable to assessed as all subjects underwent surgical intervention.

Conflict of interest

Author disclose there was no conflict of interest.

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