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Residency Area as a Factor Contributing to Basalioma Incidence in Madura Island, Indonesia

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Abstract. Incidence of skin cancer increases with age. Data on skin cancer is generally difficult to obtain. This research was conducted to know the description of skin cancer patients who were treated in Plastic Surgery Division Syarifah Ambami Rato Ebhu Hospital Bangkalan Madura during January 2014 until December 2016.

This is a retrospective cohort study. Whole population of plastics surgery patients are taken as sample, data are grouped by histopatological of Basal Cell Carcinoma appearance, age, sex, geographic location of residence from 302 samples. Result shows that there are significant correlation between Basal cell carcinoma incidence and age ($p=0,001$; $r=0,226$; 95% CI 0,142-0,294), and between Basal cell carcinoma and residency area ($p=0,007$; $r=0,153$; 95% CI 0,027-0,255) but no significant correlation between Basal cell carcinoma incidence and gender ($p=0,125$; $r=0,088$). Conclusion in our study, age and residential areas were significant factors for Basal Cell Carcinoma in Bangkalan, Madura Island-Indonesia.

BACKGROUND

In Indonesia pathological-based cancer registration data already exists, but hospital-based cancer registration data, especially skin cancer is still not complete. This resulted in epidemiological data of skin cancer in Indonesia is still lacking, while other countries have published data nationally (1). In the United States, according to National Cancer Institute data, Basal cell carcinoma is the most compared to other skin cancers. Incidence of KSB is increasing in some areas, but not in all of America. In Japan, the increasing incidence of skin lesions is Squamous Cell Carcinoma, Basal Cell Carcinoma, and Melanoma. Based on data from 94 centers, the highest KSB is around 50%, followed by Squamous Cell Carcinoma (31%) and Melanoma (21%) (Goldenberg, 2011). Meanwhile, skin cancer in Australia is still the highest skin cancer worldwide. Like other countries Basal Cell Carcinoma is more in amount than Squamous Cell Carcinoma and Melanoma. The incidence of KSB 1337 / 100.000 population, KSS 616 / 100.000 population and MM 45 / 100.000 population (Reinaw D, 2014).

The incidence rate of the Basal Cell Carcinoma case on Madura island especially Bangkalan region is high 2,59 / 100.000 population per year and ranked fourth from all cases of Plastic Surgery at the main regional public referral hospital in Madura Island -East Java Province Indonesia, with 15 new cases per year. This figure is high to reach in one regional public referral hospital in Madura Island with less than 4 million people (Primadina N, 2017). Compared with the occurrence of Basalioma that existed in regional public general hospital M.Djamil Padang which has only 18 new cases in the period of 5 years (Azamris, 2011). Madura held the second after Jakarta which has 261 cases of KSB in 9 years or 29 new cases per year. If compared to the level of incidence between Madura which has a population at risk of exposure to Basalioma 3,995,143 inhabitants especially Bangkalan which only has population at risk of exposure to Basalioma 927.433 inhabitants and Jakarta with a population of 10,177,924 inhabitants, the incidence and prevalence rate of BCC in Bangkalan is 2,59 / 100.000 population per year and Madura island is 0.375 per 100,000 population / year. This number is much greater than Jakarta which only has 0.285 per 100,000 population / year (2) (3) (Primadina N, 2017).

Basal Cell Carcinoma is one of the most common types of skin cancer encountered after squamous cell carcinoma and melanoma, caused by exposure to sunlight, contact with chemicals and chronic wounds. This type of cancer is usually at risk of white people due to lack of melanin levels in the skin. However, although the majority of maduranese's skin is colored and has melanin levels, it still has a high incidence rate of basalioma.

The high incidence rate and prevalence of basalioma in Madura need attention because this skin cancer is destructive for the surrounding tissue, so that if the lesion extends it can damage the affected organ and difficult to reconstruct again resemble normal form. For example if the nasal tip area is exposed to basal cell carcinoma, in addition to the aesthetic facial appearance, treatment procedures also require at least two operations, so that will be the problem for patients psychologically and financially. In addition, according to previous studies, this type of skin cancer can metastasize through lymph nodes and blood vessels, and the most common metastases found in lymph nodes, lung and bone, although the incidence is very rare only 1 in 1000 to 35,000 cases (von Domarus H, 1984).

There has been no research on the incidence of skin cancer present in Madura, and what risk factors exist so there is no preventive action taken by health workers in this area. Therefore, this research was conducted to find out the description of skin cancer patients who were treated in Plastic Surgery Division of Syarifah Ambami Rato Ebhu Bangkalan-Madura Hospital during January 2014 until December 2016 and at the same time looking for the most important risk factor causing high incidence of Basalioma in Madura Island. So hopefully will be able to do preventive action against this disease which can decrease incidence rate and prevalence of Basalioma in Madura Island

If the risk factors causing the high incidence rate of skin cancer Basalioma can be known then it can be done preventive action through extension efforts by local health officials in cooperation with local public hospitals and local government of Madura, so that the incidence rate can be reduced and Screening activities of patients at high risk for basalioma can be done. If this skin cancer can be detected early, the morbidity and disability rates due to this disease can be reduced.