

many as 65 individuals (23.4%) was positive; the result of 213 individuals (76.6) was negative. Abedini et al (1999) conducted a similar study in Rafsanjan. In their study, from among the entire nursing personnel (341 individuals) of Rafsanjan hospitals (Ali ibn Abi Talib, Moradi, and Niknafs Maternity Hospital) 150 (43%) were randomly selected from all clinical wards and entered their study. The nasal culture of 6 individuals (4%) were reported to be positive (7). The increase in the number of nasal carriers in our study (in comparison to the study conducted by Abedi et al) is likely owing to the increased cases of Staphylococcal infections in the hospitals, especially cases resistant to antibiotics and failure to follow health principles by the personnel that are all significant and preventable. In another study conducted by Alavi Naeini et al, 63 individuals of surgery wards (general, neurosurgery, urology, orthopedics, and otorhinolaryngology) entered the study (8). As many as 71.4% of these participants were nasal carrier of staph. This high rate of infection (in comparison to our study) is possibly owing to the fact that fewer individuals were studied, and they were all selected from the surgery wards where there is a higher risk of nosocomial infections. In terms of positive cases, the findings of the present study are consistent with those of the study conducted by Zorelli et al. They reported the nasal carriers of staph aureus between 20-55% (9). In terms of gender distribution, in the present study, 19 men (22.9%) and 46 women (23.6%) had positive culture, and this indicates that positive culture is higher in women than that of men. However, this difference is not statistically significant. In the study conducted by Abedini et al, the rate of positive culture was higher in women than that of men. This is consistent with the finding of the present study, but it is not significant (33). Thus, one cannot define a special relationship between gender and being a nasal carrier. In terms of age distribution, the participants with positive culture were mostly in the age group of over 40 years old. They account for 29.9% of positive culture cases (20 individuals). However, it was not statistically significant.

In the study conducted by Abedini et al, most of the participants with positive culture were mostly in the age group of 30-39 years old (33). This is consistent with the findings of the present study. Another variable studied was working experience in the hospital. Most of the individuals with positive culture had 15-20 years of experience that accounted for 40% (12 individuals) of those having positive culture. However, this was not statistically significant.

In the studied conducted by Abedini et al, in terms of working experience in the hospital, most of the individuals with positive culture enjoyed over 20 years of experience (7). This was somehow consistent with the findings of the present study. In terms of occupational title, nurses accounted for most of the individuals having positive culture with the frequency of 26 individuals (40%). Since nursing is one of the key professions among healthcare services. Moreover, nursing has a significant role in admission, preparation, and treatment of patients, and it has the most contact with the patients. Thus, nurses have a significant role in transmitting the disease from themselves to the others or from one patient to another, and this high

rate is statistically significant. With respect to the occupational ward, the frequency distribution of individuals with positive culture is as follows. The following had the highest relative frequency of infection: women's orthopedic ward, 55.6%; neonatal, 42.9%; delivery ward, 40%; gynecology, 33%; and emergency, 31.8%. Since the abovementioned wards had a high level of infection, they are considered as susceptible (sensitive) wards of the hospitals in terms of nosocomial infections. Thus, this rate of infection in these wards are significant and calls for adopting appropriate measures for its treatment. In the study conducted by Abedini et al, the rate of infection in different wards was as follows: ICU with 33.3% and delivery with 22.2%. In the present study, the individuals with positive culture were studied in terms of resistance and susceptibility to 10 different antibiotics. In the study conducted by Abedini et al, antibiotic sensitivity test (antibiogram) was conducted on 9 antibiotics. In the present study, the findings of the antibiotic sensitivity test (antibiogram) are as follows:

As many as 100% of the cases were resistant to penicillin, and 92.2% were resistant to oxacillin. The rate of susceptibility (sensitivity) for other antibiotics was as follows: 100% to vancomycin and ciprofloxacin; 93.8% to co-trimoxazole; 98.5% to cloxacillin; 93.8% to cefazolin; 92.3% to gentamicin; 73.8% to clindamycin; and 62.2% to oxacillin. There was relative resistance to other antibiotics. In the study conducted by Abedini et al (1999), in terms of antibiotic resistance, as many as 100% of the cases were resistant to penicillin and oxacillin. Moreover, as many as 100% of the cases had an intermediate susceptibility to vancomycin. The samples had the best susceptibility to chloramphenicol and clindamycin with 50% susceptibility. For other kinds of antibiotics the following rates of resistance has been reported: 33.3% to cefazolin; 50% to erythromycin; 66.6% to tetracycline; and 33.3% to gentamicin (7). In the study conducted by Ranjbar et al (2005), in terms of antibiotic resistance, staph aureus had a 43% resistance to cefazolin and 70% resistance to cloxacillin, and it had a 100% susceptibility to vancomycin (10). In the aforementioned studies conducted, the increased resistance to methicillin and oxacillin was significant. It is important to adopt the necessary measures towards diagnosing nasal carriers of methicillin-resistant staphylococcus, isolating the colonized individuals, eradicating this strain, and following the healthcare principles such as washing hands and using disinfectants in hospital, so that the risk of nosocomial infections will be reduced.

This strain is still highly susceptible to vancomycin, it is of significant importance to prevent the resistant strains.

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