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BEAUTIFY BUT PLEASE DO NOTIFY

Microbiology

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ABSTRACT

The study was done to create awareness in the present society were makeup plays an important role in our life. The purpose of this study explains the dangers which could end up in a life threatening situation just because of a very common practice – sharing of cosmetics especially eye cosmetics. The investigations were carried out in a private sector involving 58 subjects, who have the common practice of sharing cosmetics. The result obtained from our study proves the definite transmission of organism from person to person. Based on our findings five organisms namely *Staphylococcus aureus., CONS., Bacillus sp., E.coli., Pseudomonas aeruginosa.,* were isolated from eye cosmetics. The commonest culprit being *Staphylococcus aureus* which is a skin pathogen . Our study mainly focuses on eye cosmetics because a simple conjunctivitis could end up in a fatal meningitis. So don't share or swap eye cosmetics not even with your best friend. It is always good to be presentable and attractive but always remember "BEAUTIFY BUT PLEASE DO NOTIFY".

KEYWORDS

INTRODUCTION:

Makeup has a vital role in our society. In the present scenario, females do not step out of their home without makeup. Though this is not a wrong thing, care has to be taken as beauty doesn't come without a prize. Microbial contamination of cosmetic products is a common issue these days as it causes product & personal loss. This study focuses more on eye makeup involving kajal & mascara. Eye cosmetics are usually safe when we buy them, but misusing them can allow dangerous bacteria & fungi to grow in them. Then, when applied to the area a cosmetic can cause infection.

In rare cases, women have been temporarily or permanently blinded by an infection from an eye cosmetic. Eyelids protect the eyes from the foreign bodies, injuries, light etc and keep the cornea moist and clean. The eyelids comprises of conjunctiva, tarsal plates etc. The palpable conjunctival area which covers the eyelids is more prone to the infection. Kajal is being applied in the tarsal plates of the eyelids where tarsal glands (oil glands) are present. Conjunctival fluid (tears) doesn't dry because of these oil glands. Despite, lacremal fluid being antibacterial by itself and has vital role in innate immunity, the sticky kajal applied in the tarsal plate of the eye harbour the micro organism and thereby paving the way for infections.

The water and nutrients present in the cosmetics makes them susceptible to microbial growth although few cases of human injury due to contaminated cosmetics have been reported. Makeup products are available in a number of brands and the preservative system that provides good protection of cosmetic products against microbial contamination may differ. This study explains the dangers of sharing cosmetics especially kajal, mascara and eyeliner, which was carried out in a private sector involving 58 subjects.

MATERIALS AND METHODS:

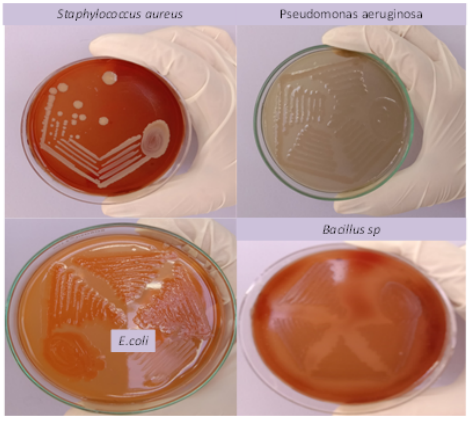
Sterile cotton swabs were used to collect samples directly from the subjects. The collected samples were taken to the laboratory for microscopy (gram staining), culture (Nutrient agar, Mac Conkey agar and Blood agar) and incubated at 37°C for 24 hours and the results were observed.

RESULTS:

TABLE:1 Organisms isolated from various eye cosmetics

SAMPLE	ISOLATED ORGANISMS
Kajal	*Staphylococcus aureus, CONS*
Eyeliner and Mascara	*E.coli, Pseudomonas aeruginosa, Bacillus species*

FIGURE:1 Bacterial isolates



DISCUSSION:

The investigations from our study prove definite transmission of microbial flora from person to person using shared eye cosmetics. We have isolated five bacteria from three eye cosmetics (Kajal, Eyeliner & Mascara) used by the 58 subjects. The most frequently identified organism was *Staphylococcus aureus* which is a common skin microbe causing conjunctivitis, stye, folluculitis, boils and food poisoning. The second most common was *CONS* and *Bacillus spp*., followed by *E.coli & P.aeruginosa*. Though this is an awareness study of the common practice of sharing cosmetics especially eye cosmetics, but it has adverse effects also.

The infections from the eye can be carried out to the nose through a nasolacremal duct. As there are interconnections between nose and sinuses, it might cause sinusitis. From the nose infection can be transmitted to the middle ear by Eustachian tube and might cause otitis media. From the ear it can spread to the cranial cavity. Thus a simple conjunctivitis could end up causing fatal meningitis.

Don't share or swap eye cosmetics – not even with your best friend. Another person's germ may be hazardous to you. The risk of contamination may be even greater with "testers" at retail stores as number of people use the same product for testing. Incase, we must sample cosmetics at a store we should always make sure they are

applied with single use applicators like a clean cotton swab. If any eye cosmetic causes irritation, stop using it immediately. We must avoid using eye cosmetics if there has been eye infection or the skin around the eye is inflamed. We must discard the eye cosmetics for what we were using when having an infection.

We must not allow cosmetics to be covered with dust or contaminate with dirt or soil. If an eye cosmetic is dried up never add saliva or water to moisten it. The bacteria from the mouth may grow in the eye cosmetic and cause infection, and moreover adding water may introduce bacteria and will dilute the preservative that is intended to protect against microbial growth. Only an eye cosmetic is recommended to be used near the eye. Lip liners should never be used as eyeliners. Cosmetics should never be applied in a moving vehicle and never use cosmetics which are held in hot cars for longer periods as itr leads to deterioration of the preservative.

It is always good to be presentable and attractive but always remember "BEAUTIFY BUT PLEASE DO NOTIFY".

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