



SHAMPOOS IN DERMATOLOGY

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KEYWORDS :

Shampoos are primarily used for cleaning of the hair and scalp skin, in addition to it they also beautify the hair. Shampoos can either be medicated or non-medicated. Corticosteroids, ketoconazole, zinc pyrithione, coal tar, salicylic acid etc are some of the important components of medicated shampoos and thus help in management of various scalp disorders like psoriasis, seborrhoeic dermatitis etc.¹

Detergents, sequestering agents, thickeners, opacifiers, fragrances, preservatives, conditioners and special additives are the different ingredients of any shampoo. Detergents also known as surfactants can be anionic, cationic, non-ionic, amphoteric and natural. Surfactants decrease the surface tension between water and dirt, thus facilitating the removal of environmental dirt from the hair and scalp. In most shampoos, the base consists of anionic and amphoteric surfactants.^{2,3}

Anionic detergents are negatively charged and are good at removing sebum from the scalp and hair. Lauryl sulfates, laureth sulfates, sarcosines, sulfosuccinates are the different anionic detergents. Cationic detergents have a positively charged polar group. These are poor cleansers and do not lather well. But these are excellent at imparting softness and manageability to chemically damaged hair. Long-chain amino esters, HTAB (hexadecyltrimethyl ammonium bromide), TTAB (Trimethyltetradecyl ammonium bromide) are the examples of this type of detergents. Amphoteric detergents have both positive and negative charged polar group. Mostly used in baby shampoos.

Cocamidopropylbetaine and sodium lauraminopropionate, betaines, sultaines, and imidazolinium derivative belong to this group of detergents.^{4,5}

Natural detergents come from plants such as sarsaparilla, soapwort, soap bark. These have excellent lathering capabilities but cleansing of hair is poor. They are mostly used for marketing purposes. Foaming agents: have nothing to do with cleansing, they basically help in the commercial success of a shampoo formulation by satisfying the customer, as there is a common myth among general population that a product which foams better cleans better. Thickeners and opacifiers: these change the physical and optical properties of the shampoo and thus improve the cosmetic acceptance. Again these have no effect on hair cleansing. Preservatives: they resist germs and prevent decomposition of the shampoos. Sodium benzoate, parabens, 1,3-dimethylol-5,5-dimethyl (dmdm) hydantoin, tetrasodium EDTA, methylisothiazolinone and quaternium-15 are different examples. Special additives: Chemical sunscreens to vitamins like panthenol, provitamins, botanicals like tea tree oil are sometimes used in certain shampoos. These products are mainly used to differentiate one shampoo from another in terms of marketing claims.^{6,7}

CONCLUSION:

Detergents/surfactants are the most important ingredients of any shampoo. 2-4 surfactants are present in any kind of

shampoo, but the one which is listed first is present in maximum concentration. Anionic surfactants are preferred for oily hair, cationics/amphoterics for dry to normal hair, amphoteric surfactants for baby hair. Cationic surfactants are also preferred for chemically treated or colored hair.

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