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Letter to the Editor

Tasleem's water jet sign - A new sign in dermatology

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Sir,

The field of dermatology is known by various signs many of which bear clinical importance while others provide academic assistance to the postgraduate scholars. A number of signs have been mentioned in dermatology and many more are being introduced as a result of meticulous work going on in this field of medical science. With the advent of Dermoscopy, many new signs have been introduced in the recent past. In this article, the authors have mentioned their observation while working with the management of cutaneous warts and have introduced a new sign in dermatology which has been named as " Tasleem's Water Jet Sign".

During the treatment of warts in dermatosurgery theatre, the authors observed a peculiar phenomenon. In our dermatosurgery unit, we mostly treat warts by radiofrequency ablation. While giving local anesthesia to the site of wart, we observed that sometimes the local anesthetic spills out back through the verrucous surface of the wart like a jet of water which has been referred to as 'Water Jet Sign'. Many times this jet of local anesthetic directly aims the face including the eyes of the treating doctor. However, those dermatologists wearing spectacles or protective glasses, the water jet of local anesthetic may directly strike these protective shields sparing the eyes. One of the authors has the experience of this jet striking his spectacles several times during the procedure.

Why this jet of local anesthetic comes out back needs to be explained. Before we explain the possible genesis of this sign, the basic histopathology of a wart needs to be revived. Histopathologically, common and palmoplantar warts are characterized by hyperplasia of all layers of the epidermis. There is marked hyperkeratosis with associated parakeratosis. Both the stratum granulosum and stratum spinosum are conspicuously thickened. There is steeply sloping "church spire" papillomatosis. Epidermal rete ridges are elongated and flattened and are bent inwards towards the centre of the wart [1,2]. So from this pathological description, it becomes clear that in a wart, there are vertical columns of dense papillomatosis and some of which may be separated from each other by potential weaker spaces. When a local anesthetic solution is injected into the base of the wart, the incoming solution of anesthetic doesn't find a sufficient space in tissues like palms, soles, etc where the skin is tough and less yielding which is also contributed by the dense hyperkeratosis of the wart itself. As a result, the local anesthetic solution is held under a high pressure at the base of the wart which tries to negotiate through any weaker area. When more anesthetic solution is being injected, the pressure at the base of the wart increases as the solution is now held in a tight unyielding space. The dense hyperkeratosis of the wart, tough connective tissue of the palms and soles and the elongated rete ridges which are bent inwards towards the centre of the wart do not allow the anesthetic solution to escape through the bottom and sideways. As a result when more anesthetic solution is injected, intracompartmental pressure increases more and more and draws the solution through the narrow channels present in between the columns of dense papillomatosis away from the base of wart and comes out of it as a jet of water.

The water jet sign is usually seen in the palmoplantar warts where the skin is tough and unyielding. We didn't observe this sign in verruca plana and at areas with loose skin like axillae, scrotum, neck, eye lids, etc. This sign has some importance. Firstly, a dermatologist dealing with warts must be wearing eye protection to avoid chances of getting the jet of local anesthetic into the eyes during

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the procedure. Secondly, when this sign is present, it can augment the diagnosis of warts. Lastly, it adds to the academic armamentarium of postgraduate scholars.

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