Ulcerated Infantile Haemangioma of Buttock Successfully Treated With Topical Timolol

Sir,

We report a case of Infantile haemangiomas (IHs) are the most common benign vascular tumours of infancy, frequently requiring no intervention. Eighty percent of IHs is focal and solitary. Fifteen percent of cutaneous haemangiomas occur on the extremities. A large size or a specific location or both may carry complications such as ulceration which is one of the main complications, and active treatment is usually required to manage pain, potential scarring and occasionally, bleeding and infection. Oral Propranolol is used in the treatment of IH and is found to be an effective treatment for complicated IH, replacing systemic corticosteroids as first-line therapy. Currently, recommendations for instituting treatment with topical Timolol in infants differ among different specialties and academic centres. Ulceration is a major cause of morbidity in IHs. They occur in up to 13% of cases. Timolol, a topical beta-blocker, by causing vasoconstriction, inhibition of angiogenesis and induction of apoptosis induces a sustained response in IH. The drug is available in India as ophthalmic solution. The response of ulcerated IH to topical Timolol is good and promising without the potentially harmful side effects such as hypoglycaemia, bronchospasm and hypotension of oral Propranolol.[1,2]

We report a 17-day-old female child presented with haemangioma since birth, involving the left buttock, with ulceration. Ultra sonogram of the abdomen and pelvis was normal. The infant was found to have no systemic involvement. The infant was administered topical Timolol. The parents were advised to use the three drops of the 0.5% ophthalmic drops twice daily.

Pulse, blood pressure, heart and respiratory rates were monitored daily. Blood glucose level and platelet count were tested daily for 1 week. The skin was examined for any infection or active bleed. There were no local or systemic side effects observed in the daily observation during the first one week. There was no need for admission. The child was reviewed once in 14 days and photographs taken periodically. The response was significant on each review consult and after 3 months the lesion healed with an atrophic scar at the site of ulceration [Figures 1-3]. Medication was continued for a further period of 2 months and then stopped. Skin graft is planned for a later date if required. The child is being followed up and there has been no recurrence in the past 6 months.

Ulcerated haemangiomas are often painful in infants; they incur risk of local or systemic infection and can lead to permanent, unsightly scars. In a retrospective observational study, the authors had reported the high efficacy of oral Propranolol in an infant with ulcerated IH on the leg.[3] The striking effect of beta blockers on growing IH can be attributed to three molecular mechanisms: Vasoconstriction, inhibition

Figure 1: Ulcerated infantile haemangioma of buttock successfully treated with topical Timolol, pre treatment

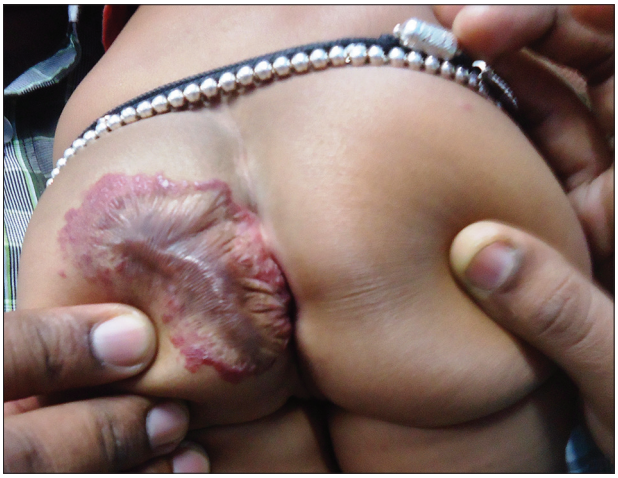

Figure 2: Ulcerated infantile haemangioma of buttock successfully treated with topical Timolol 45 days per treatment

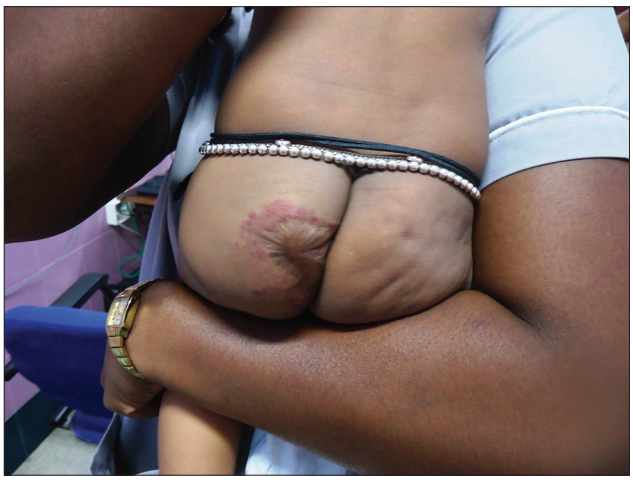

Figure 3: Ulcerated infantile haemangioma of buttock successfully treated with topical Timolol 90 days per treatment

of angiogenesis (reduced expression of vascular endothelial growth factor [VEGF], basic fibroblast growth factor [bFGF], and hypoxia inducible factor-1 alpha [fHIF-1a] matrix metalloproteinase [MMP] and induction of apoptosis. However, topical Timolol is safer and easier to use when compared to Propranolol which has potential side effects like bradycardia, hypotension and hypoglycaemia which can lead to long-term neurologic sequelae.[4] Bradycardia, hypotension, bronchospasm, peripheral vasoconstriction, weakness and fatigue, sleep disturbance, hypoglycemia are major systemic side effects of Timolol. Pruritus is a rare cutaneous side effect to topical Timolol. However, topical Timolol has been found to be useful in several other studies without major side effects.[5] Our case confirms the success of therapy with topical Timolol for ulcerated infantile haemangioma. We found no side-effects. Topical Timolol is a highly effective and safe new treatment modality for ulcerated IHs in infants, as in our case. Use of platelet-derived growth factor, will reduce the extent of scarring. However, systemic absorption should be born in mind while treating larger ulcerated lesions.

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