

# Stevens-Johnson Syndrome Following Measles Vaccination

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## Introduction

Erythema Multiforme (EM) is specific acute hypersensitivity syndrome of multiple etiologies. It has distinct clinical pattern the hallmark of which, is the erythematous rash (so called iris or target lesions). Although a single type of lesion may predominate during a particular attack, the basic lesion of erythema multiforme are macular, urticarial and vesicobullous<sup>1</sup>. The diagnosis of Erythema multiforme is clinical<sup>2</sup>. Steven Johnson Syndrome (SJS) is considered as an extremely severe form of erythema multiforme with high fever, prostration, constitutional symptoms and widespread bullae which involve most of the cutaneous surfaces and mucous membranes of the conjunctivae, mouth, flares, anorectal junction, vulvovaginal region and urethral meatus<sup>3</sup>. By definition involvement of skin and atleast two mucous membranes constitute the diagnosis of SJS. But new insights, especially the histopathology, are compelling many to recognize this syndrome as being distinct from EM<sup>4</sup>. Various etiological agents have been implicated in the causation of SJS. Association of syndrome with ingestion of drugs, including sulfonamides, penicillin, anticonvulsants and barbiturates, has been observed<sup>5</sup>. Infectious agents, especially viruses have been thought to cause the syndrome<sup>6</sup>. Steven Johnson Syndrome has been reported in association with Hepatitis B vaccination<sup>7</sup>. We report a case of severe SJS following measles vaccination in a child, an association as yet unreported in literature.

## Case Report

A ten month old male baby presented to the out-patient department of the Children's Hospital, Islamabad, with complaints of fever, fretfulness and poor feeding of few hours duration. On examination he was febrile and had a generalized erythematous rash. He had received his measles vaccination in preceding 24 hours. A diagnosis of adverse reaction to measles vaccination was made and the child was sent home on antipyretics with an advice to return if symptoms aggravate. The child returned in the next 12 hours with erythematous, vesicular rash which also involved the soles and palms. there was severe conjunctivitis alongwith oral sores involving the tongue, gums, palate and inside of cheeks. Child was hospitalized with the diagnosis of Steven Johnson syndrome and started on steroids alongwith supportive care. In the next 24 hours his condition further deteriorated and he also developed hematuria and bilateral crepitations on chest auscultation. X-ray chest showed patchy consolidation suggestive of bronchopneumonia. Child was started on antibiotic therapy. In addition, he needed nasogastric feeding due to the extreme nature of his oral sores. Paediatric ophthalmologist was involved for the care of eyes.

Chest infection responded to the antibiotic therapy. Hematuria settled over the next 2 days. Skin and mucosal lesions gradually started healing within two weeks. The nasogastric tube was removed after three weeks and the child sent home in satisfactory condition after four weeks.

## Discussion

Erythema multiforme is a hypersensitivity reaction to multiple agents drugs, viral infections and fungi have been implicated<sup>8</sup>. Steven Johnson Syndrome is considered as part of a continuum of this immunologically mediated mucocutaneous disease with increasing grade of severity. It is a disease of

sudden onset with a prodromal phase of 1 to 14 days. The skin eruption consists of widespread flat or atypical target lesions or purpura macules mostly distributed on the trunk along with limbs<sup>9</sup>. In addition to involvement of mucous membranes, extension of lesions to tracheobronchial tree and secondary bacterial pneumonia is a recognized complication<sup>10</sup>. Similarly extensive involvement of urogenital tract can lead to haematuria, U.T.I., nephritis and even progressive renal failure<sup>11</sup>. The list of etiological agents is ever increasing. Recently drugs like allopurinol<sup>12</sup>, terbinafine<sup>13</sup>, lamotrigine<sup>14</sup>, GM-CSF<sup>15</sup>, hepatitis B vaccine and hepatitis C infection<sup>16</sup> have been implicated as etiological agents triggering the reaction. The particular case reported followed measles vaccination, an association yet not reported in the literature. Measles virus is also a recognized cause of SJS. In addition the present report shows particularly severe case involving more than 50% of skin surface along with classical complications described in the literature. We conclude that SJS following measles vaccination is a rare occurrence. Pulmonary and renal involvement are recognized complications of SJS. Systemic steroids, careful antibiotic selection and supportive therapy are life saving in the management of this severe disease.

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