Adverse Reactions to Vaccine and Horse Antisera: How to Approach

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Adverse reactions are any undesirable effects occurring after drug or vaccine administration. Vaccines and horse antisera, like all other drugs, could cause adverse events. Local reactions (e.g., pain, redness, swelling at the injection site), and systemic reactions (e.g., fever, myalgia, headache, nausea) are common and often misunderstood as allergic symptoms. The hypersensitivity reactions following immunization may be broadly classified according to timing into immediate (e.g. urticaria, angioedema, anaphylaxis) and non-immediate types (e.g. maculopapular rash, serum sickness). Severe allergic reaction is rare (i.e. 1–3 cases per million vaccine doses), but whenever it happens, the transfer to allergists is needed for allergological workup, as the culprit allergen may be potential to cross-react with common components in other vaccines and foods.

The stepwise approach investigation, beginning with detailed history, physical examination, causality assessment, in vivo testing (e.g. skin test, patch test) and in vitro testing (e.g. specific IgE), would prevent further life-threatening events and avoid unnecessary vaccine restriction. Vaccine ingredients that may be allergenic include infectious agents, preservatives, adjuvant, stabilizers, antibiotics, and residual media, as well as inadvertent contaminants during vaccine handling. The components implicated in hypersensitivity reactions include egg protein, milk, gelatin, latex, and/or Saccharomyces cerevisiae yeast. In suspected allergic cases, the decisions for additional vaccination should be made on the basis of a case-by-case risk/benefit analysis. Vaccines should always be given by well-trained physicians in appropriate settings where the emergency equipment must be readily available, with the observation period of at least 15-30 minutes thereafter. All serious events occurring after vaccination should be reported to the responsible department.

References

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