Is Early Vaccination after Splenectomy Effective at Preventing Later Infections by Encapsulated Organisms?

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Background: The timing of post-splenectomy vaccinations after trauma has remained controversial. Prior publications have stated that ideal vaccinations should occur at post-operative day 14; however, many trauma patients are vaccinated earlier.

Methods: Utilizing the Joint Theater Trauma Registry, we sought to analyze all demographics of United States soldiers with a Splenic Injury (Grades I-V) from November 2002 - January 2012 based on their operative or non-operative intervention, the total number of documented encapsulated organism isolates from splenectomized patients, and military adherence to the 2008 Clinical Practice Guideline (CPG) mandating immediate post-operative vaccination after splenectomy.

Results: Two patients out of 158 had Streptococcus Pneumonia isolated from their blood stream and respiratory tract respectively after complete vaccination over 394 patient follow-up years. Neisseria Meningitis and Haemophilus Influenza were not identified post-splenectomy. The military's implementation of a CPG resulted in earlier post-operative vaccination and compliance greater than 90%.

Conclusions: The timing of post-operative vaccination does not appear to affect long-term sequelae from encapsulated organisms. Secondly, the United States Military implementation of a CPG improved overall vaccination compliance.