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Editor

Chest Wall Deformities

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Preface

Chest wall deformities present a wide spectrum of anterior thoracic cage anomalies, and depending on the specific type of deformity the most appropriate approach must be employed to achieve optimal results.

The approach towards management of patients with chest wall deformities has undergone enormous transformations in the past century. In the beginning of the last century, with the advent of initial successes in open procedures for treatment of various thoracic organ pathologies largely attributed to the advances in anesthesia and assisted ventilation, correction of the deformities of the anterior chest wall was attempted. These pioneers who performed chest wall deformity repairs have to be commended for the development of their respective techniques bearing in mind the unavailability of high quality commercially manufactured instruments in that period. However, when compared to contemporary times, slow communication and exchanges between centers at that time contributed towards the emergence of variations in techniques for the surgical management of chest wall deformities. Furthermore, at that time the evolution of novel techniques were known either through presentation at National Congresses or through publications in local languages, which again played a major role in the lack of popularity or precise understanding of these techniques. Also, with the limited use of photography, it was difficult to picture the results of corrective surgery and to understand the analysis of results. Towards the end of the last century, larger series were published using the few open techniques that gained popularity, but these reports were limited to centers that gained surgical experience after management of large number of patients.

The introduction of a minimal access repair of pectus excavatum in the beginning of this century was the first technique that had a global impact in the acceptance of a single concept towards the management of the funnel chest type of chest wall deformities. The minimal access repair technique has been frequently referred incorrectly to minimal invasive repair, bearing in mind that this technique is extremely invasive but is only performed through small-size incisions. The popularity of minimal access repair in the present era of mass Communications has allowed comparison of the outcomes between centers worldwide and towards the development of safer standards in performing these procedures. The introduction of thoracoscopy in the minimal access repair technique was an important addition to this technique to improve safety during surgery. The success of minimal access repairs of funnel chest was then modified and employed for the treatment of pigeon chest

type of chest wall deformities. In addition to the widespread practice of minimal access repairs, another aspect in the treatment of chest wall deformities was the utilization of noninvasive techniques such as the application of suction devices for the treatment of certain types of funnel chest deformities and the use of braces for the correction of specific types of pigeon chest deformities.

This monograph is a compilation of the various interrelated subjects associated with chest wall deformities. The introductory sections address topics that are related to classification, diagnostics, and associations, knowledge of subjects that are necessary when managing patients with these deformities. This is followed by chapters that focus on the management of funnel chest deformities and surgical techniques for repairs. The chapters on techniques have been presented with schematic illustrations to guide the reader through the important steps of the procedures. Dedicated sections focus on the management of pigeon chest deformities and their operative repairs. The final section's emphasis is on other conditions that present as chest wall deformities as well as options to their respective management. This comprehensive work is a concise collection of conventional surgical procedures and contemporary techniques for surgeons that manage patients with chest wall deformities.

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