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IADVL Textbook of Innovations in Dermatosurgery



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Innovations in Dermatosurgery

"Innovating is seeing what everybody has seen and thinking what nobody has thought"

—Dr Albert Szent-Gyorgyi

In this world all living beings have survived by innovations. Innovations, as against inventions, are doing the same in a better way so as to adjust to the changes or to the needs of all. The good old story of a thirsty crow and water jug is the best example of innovation. Unless we are innovating, we will not change and the saying goes "Nothing is constant except change". It is also true that innovations lead to inventions.

Dermatosurgery is a branch of Dermatology that has great potential for innovation. What we are doing can be made better, easy and comfortable to the patient and the dermatologist by simple alterations or additions. Many dermatologists, worldwide, have proposed and are practicing such innovations. Many Indian dermatologists have contributed their own innovations. Most of them have published their work and others are practicing them.

There is a need to make these innovations universal so that others can practice these methods. With that idea in mind, as part of presidential program, a book was planned. This book is a compilation of all innovations proposed and practiced by authors. They have been gracious in contributing and making their work available to all of you.

"What is now proved was once only imagined"- William Blake. If we apply this for innovations we can say "What we practice now was once only imagined". The editorial board comprising of **Dr Karalikkattil T Ashique, Dr Feroze Kaliyadan, Dr Sanjeev Gupta, Dr Deepak Jakhar, Dr Puravoor Jayasree** and **Dr Saurab Singh** has been very enthusiastic to prove this. The efforts of IADVL Academy Chairperson Dr Deepika Pandhi and Convener Dr Dipankar De are noteworthy. Many options were considered for preparing this book before agreeing on the present pattern.

I am proud to present this great work to you. This book will be of immense help to you all in practicing dermatology and dermatosurgery and could be a friendly reckoner on your table. It may also act as an impetus to design your own methods to improve what you do.

"If there is a way to do it better, find it"

— Thomas A Edison



Jayadev Betkerur

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Message from the Honorary Secretary General

Indian Association of Dermatologists, Venereologists and Leprologists (IADVL) is happy to present this new endeavor “**IADVL Textbook of Innovations in Dermatosurgery**” that can serve as a ready reckoner for the practical aspects of various dermatosurgery procedures. This book is the outcome of one of the presidential projects by Dr Jayadev Betkerur, President, IADVL 2021.

Innovation is a process by which a domain, a product or a service is renewed and brought up to date by applying new processes, introducing new techniques, or establishing successful ideas to create new value. The creation of value is a defining characteristic of innovation. In dermatosurgery, innovation is always required to improve treatment outcomes. Also, it is the need of the hour that our medical education should stimulate young doctors to innovate for improving various treatment modalities and be adept with newer technologies offered in the field thereby providing new value.

Most of the dermatosurgery procedures are effective and are associated with minimal discomfort, low incidence of adverse effects and short recovery time. High satisfaction for both patient and physician has contributed to their growing popularity and availability in the primary care setting. As patient demand for aesthetic therapies increases, a dermatosurgeon should be familiar with various modifications and innovations in procedures when advising patients or incorporating these techniques into their medical practice. This necessitated a need for important validated update on text and references on the subject.

The editors have included relevant topics by the experts who have contributed various innovations in their regular practice with great success. In short, this book includes evidence-based data, practical tips and key points from well-known experts.

I am sure that the book will serve the need of our students and physicians who desire to be updated on dermatosurgery procedures in their practice. I sincerely congratulate the hard work and dedicated efforts of the editorial team headed by Dr Ashique K T, the chief editor, Dr Feroze Kaliyadan and Dr Sanjeev Gupta and the Assistant Editors Dr Deepak Jakhar, Dr Puravoor Jayasree and Dr Saurabh Singh and all the contributors.

I wish this initiative all success.



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Foreword from IADVL Academy

The specialty of dermatology has evolved tremendously over the years. The most significant change has been progression from primarily medical management of dermatologic diseases to development and standardization of several surgical therapeutic modalities. There has been a steady rise in the variety of procedures being performed by dermatologists and innovations in this field has paved the way for the growth of this speciality especially over the last decade. These dermatosurgical innovations have simplified the procedure, thereby enabling more people to practice them and also have improved patient outcomes. However, such innovations as with any therapeutic intervention need proper evaluation and training.

It is our great pleasure to present to you the title **“IADVL Textbook Innovations in Dermatosurgery.”** It was an unmet need of practitioners of dermatosurgery to have a comprehensive textbook on innovations in dermatosurgery. This title is a well thought of step in that direction. Our compliments to President, IADVL 2021, Dr Jayadev Betkerur who conceptualised this project.

Dr Ashique KT, the chief editor along with other editorial colleagues—Dr Feroze Kaliyadan, Dr Sanjeev Gupta, Dr Deepak Jakhar, Dr Puravoor Jayasree and Dr Saurabh Singh have done a stupendous job for the members of Indian Association of Dermatologists, Venereologists and Leprologists. They drafted an exhaustive table of content, selected authors who are eminent experts in the respective fields, edited the chapters and brought out this unique textbook. It has been a pleasure to be a part of the process of publication of this title from conception to review and finally publication. Our thanks are due to members of IADVL Academy 2021 for their critical inputs.

There are 22 chapters addressing general aspects like basic dermatosurgery and pre-procedure planning, dermatosurgery in pediatric population and documentation and photography that will help the young colleagues who are about to start their practice to do so with much more confidence. There are chapters on vitiligo surgery, including tissue and cellular grafts, cryosurgery, radiofrequency, chemical peeling, acne procedures, keloid surgery, sclerotherapy, Botulinum toxin, onychoscopy and nail procedures, trichoscopy and hair transplantation, liposuction and fat grafting, laser procedures and therapy with blood derivatives and phototherapy. The chapters are well illustrated for greater comprehension and videos for demonstration of several procedures are provided at relevant places. The authors of these chapters must be hugely complemented for their tremendous work.

We congratulate everyone involved in this project and wish this title serves as a ready reckoner for the latest in dermatosurgical procedures. We are confident that the book will serve the needs of all students, physicians or researchers who would like to keep updated about the current advances in procedural Dermatology



Deepika Pandhi
Chairperson
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Dipankar De
Convener
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Innovation is very close to my heart. This book on innovations in dermatologic surgery is an attempt to illustrate examples of innovations as well as to inspire people to think out of the box.

Innovation is identifying the problem and finding ways to overcome the issues. Once a problem is identified, it is stored in the mind along with other problems. Next, we should have a constant awareness of our surroundings and try to explain every small thing we see in a scientific manner instead of accepting it as an act of supernatural power. Our eyes and ears are our radar and should always stay tuned. Solutions come at unexpected places, time and from people; known or unknown. Ask Archimedes and he will tell you how he got the idea in a bathtub. A cobbler may teach one how to handle glue without developing allergy or irritation and this input can result in an innovation.

Innovation can also be an outcome of observing a process or a procedure in our area of interest, or even in other fields and telling ourselves, "There is a better way to do it, find it." And we know that finding a cheaper or safer or faster way to get something done is also an innovation.

No innovation is possible without one or more resource people who are experts in fields about which the innovator knows precious little but enough to ask the right questions. A symbiotic relationship founded on mutual respect should be cultivated with the experts.

Let me share my story of the banana leaf. We know that banana leaf is used as dressing in severe drug reactions such as toxic epidermal necrolysis. We also know that many patients with this condition can develop secondary infection. Then we started asking questions. Is it possible that the banana leaf is the source of infection? We cultured the leaf and detected bacteria which could infect the patient. Can we get rid of this? We tried using spirit swipes but failed. Next, we applied spirit and set it afire and then looked for bacteria, but it was still present. We then heated the leaf over flame and still culture detected bacteria. Then we went to the sterilizing unit of the hospital and got the leaf sterilized as any other clothing and it worked. However, we had to know whether the sterilization would result in loss of its properties such as stretch ability. Our resource persons were the experts in the textile department who helped us conduct tests for tear, shear and tensile properties of the leaf. We used equipment used to study textiles. The major drawback of banana leaf is that it tends to tear easily, and this was overcome by using a micropore tape to reinforce the leaf which minimized the tearing. While testing the banana leaf on the patients we noticed a bad odour, possibly due to thiol group of chemicals. The next question was, is there some way to reduce the odour and this resulted in our study using activated charcoal. To learn more, we collaborated with an international expert, an NRI, in the field of activated charcoal who had travelled to India to modernize the Activated Charcoal plant. Although, when we state the questions and explain the solutions, stated sequentially it all seems obvious, however the actual process takes a long time and numerous failures before one can come up with possible answers.

To quote APJ Abdul Kalam, "Don't Read Success Stories, You Will Only Get the Message. Read Failure Stories, You Will Get Some Ideas to Get Success."

This is but one story and there are many more. My tryst with iontophoresis for enhancing drug delivery is but one example. It has company.

In this book we will see how each innovator has toyed, played with his ideas. Getting an idea is one thing but building on it is hard work or fun....or both! It depends on how one looks at it.



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Editor's Note

We gladly present to you, **"IADVL Textbook of Innovations in Dermatosurgery"**, in which innovations by Indian authors in the field of dermatosurgery are compiled and explained. Proposed by Dr Jayadev Betkerur, as one of the presidential projects of IADVL EC 2021, this has been a challenging mission which we took up passionately. Contrary to the initial apprehensions we had regarding this novel project, the book has turned out well and we are sure it is going to be a handy resource for any dermatologist.



There is a notion, more so among the young breed of dermatologists, that research and development require heavy investments and huge academic departments. That innovation and original thinking can stem only from sophisticated labs or hi-tech investigations and such resources are a prerequisite for path breaking ideas. This compilation is proof enough to refute them. Discussion and collaboration with like-minded seniors and colleagues can bring about ingenious discoveries and practical solutions.

Dermatologists in India were relatively late in accepting dermatosurgery in its full range. Especially for those in the peripheral and rural areas, there is the twin ordeal of handling large volume and variety of patients, in a limited resource setting. Now that procedural dermatology has become an integral part of dermatology practice in India, this phase has opened up the field to innovations especially cost-effective ones.

Our authors are experts in their respective fields with many published innovations in various reputed journals across the globe and we are thankful to them for their tireless efforts to make this book a reality. We have involved only Indian authors and also stress has been given to include maximum innovations by Indian dermatologists in each chapter. Our esteemed reviewers also contributed equally well to improve the contents of this book.

This book, we hope, would be an inspiration for all IADVLites to start documenting their innovative ideas, however trivial they may seem. Sharing information is the way to help our brethren and also enhance the capacity of our speciality as we are already under threat of encroachments from non-medical professionals and even quacks especially in the area of procedural dermatology.

We would like to extend our gratitude to Prof. C R Srinivas for penning the foreword, sharing his life lessons as an innovator with vast experience.

I, on behalf of the entire editorial team, would like to thank our ever-zealous president Dr Jayadev Betkerur, who nurtured this book from its conception to the final stages of execution like designing a beautiful cover. Hon. Secretary General Dr Feroz K along with the EC IADVL 2021 has always offered their relentless support for this project. It would have been an impossible task if not for the strong backing from the IADVL Academy Chairperson Dr Deepika Pandhi and Convener Dr Dipankar De and the other academy members who guided us throughout this journey.

My strong team were the pillars in making this dream a reality and I sincerely acknowledge the help of the Associate editors Dr Feroze Kaliyadan and Dr Sanjeev Gupta and Assistant editors Dr Deepak Jakhar, Dr Puravoor Jayasree and Dr Saurabh Singh. Thanks to the CBS Publishers and Distributors Pvt Ltd for being prompt and professional in shaping this book to what it is today.

Last but not least, we are grateful to all our patients who presented to us with difficult situations and made us think out of the box.

We hope that this compilation, like a "string of pearls" proves invaluable to you in your dermatosurgery practice!

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