Second Annual Meeting of the International Society of Pediatric Wound Care

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The overarching goals of the International Society of Pediatric Wound Care (ISPeW) are to (1) set global standards for the assessment and treatment of pediatric wounds of varying etiologies; (2) provide a forum for international interprofessional collaboration among healthcare professionals, researchers, educators, and industry leaders dedicated to the care of pediatric wounds; (3) promote and support clinical research focused on the prevention, assessment, and treatment of pediatric wounds; (4) collaborate with wound care organizations worldwide on pediatric wound care issues; and (5) provide evidence-based pediatric wound care education to healthcare professionals, parents, and lay caregivers. This edition of *Advances in Wound Care* includes some of the work that was presented at the 2014 ISPeW meeting in Rome. The first article by Dr. Romanelli, is an in-depth description of the progression of skin physiology throughout its maturational stages and clinical implication. A cutting edge article by Dr. Timothy King then follows, with regard to scar prevention in postnatal tissues. This is followed by a comprehensive look at debridement techniques in pediatric trauma by Dr. Ankush Gosain. Next, is a cautionary article by Dr. Luca Spazzapan that examines the prevalence of diabetic foot ulcers in children and the potential for an epidemic. The last article in this series is from the keynote speaker, Dr. Amit Geffen, who eloquently examines the use of biomaterials to offload and prevent pediatric pressure ulcers.

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THERE IS A COMMON MYTH that wounds in children heal without any problems. At face value, this opinion may have some merit. After all, children are usually in good health, without environmental influences such as smoking and alcohol or adult-type comorbidities such as vascular insufficiency and diabetes that can delay tissue repair. However, the current clinical environment is rapidly changing. Over the past 20 years, we have made significant advances in pediatric medicine and surgery, which has resulted in the survival of children, who historically, would have not survived. This has led to a more sick pediatric

patient population, which is compounded by the increasing complexity of our surgical procedures. In addition, there is a growing epidemic of adult-type diseases in children, such as obesity and diabetes, which can impact wound repair.¹⁻³ Furthermore, there are more drug-resistant bacteria and an increased prevalence of methicillin-resistant staphylococcus aureus (MRSA) colonization, which can lead to a challenging community microbial profile that, in turn, leads to more wound infections.⁴⁻⁷ A recent study using the NSQIP database demonstrated an increase in the surgical site infection rate in neonates,

at 3%, compared to an overall rate of 1.8% in the general pediatric surgery population.⁸ This has been attributed to more virulent bacteria observed in our intensive care units. All of these factors have coalesced into a new clinical wound care problem in children that is unfortunately grossly underappreciated and unrecognized.

A common strategy to dealing with issues in children is to treat pediatric patients as if they are "little adults." The integumentary, physiology, psychomotor, cognitive, and psychoemotional developmental continuum that encompasses pediatrics from prematurity to late adolescence explains why this approach is almost never effective. The spectra of the types of wounds in children are much different than the common distal extremity wound and pressure ulcers over bony prominences seen in adult patients. In pediatric wound care, the variety of wounds encountered include more soft tissue infections,⁸⁻¹⁰ device-related pressure ulcers,^{11,12} ostomy and gastrostomy tube issues, congenital skin diseases, congenital malformations, and traumatic injuries that can encompass large areas of the body.¹³⁻¹⁵ We also have less tolerance for expecting children to endure pain, and so frequently many pediatric procedures are done with some level of anesthesia, which in an adult patient would be done with minimal anesthetic and at the bedside. A change of a negative pressure dressing or the drainage of an abscess in the operating room is a prime example of this difference. There are also behavioral differences; for example, asking a teenager to be compliant with a wound care regimen can be challenging, and there is a greater emphasis on posthealing cosmesis. In addition, children of all ages are in a continuous growth phase and exhibit a different skin physiology overtime as their skin matures. Consequently, an individualized approach to meet nutritional and metabolic demands that evolves overtime as the patient grows, is required to achieve optimal tissue repair. Last, some may argue the biggest difference for children may be in the availability of advanced wound care products. Adult wound care is a multibillion dollar industry,¹³ with almost none of these products being targeted toward children or approved for use in pediatric patients. The products are manufactured for adult patients and this can lead to issues regarding their application in children; for example, size mismatch in applying a dressing or an adhesive that may not be appropriate for fragile skin in a pediatric patient population.^{14,15} This has led to a new generation of "creative" wound care professionals that adapt adult wound products to children to provide im-

proved wound care and facilitate product design advances well beyond wet-to-dry dressings.

Taking these issues and problems into consideration, a group of three clinicians in Italy, Guido Ciprandi, Marco Romanelli, and Corrado Durante, decided to host the first First International Symposium on Pediatric Wound Care in Rome, Italy in 2011. This pediatric wound care symposium convened multidisciplinary world leaders in pediatric wound care, pediatric plastic, hand, burn, orthopedic, podiatric and general surgery, basic science, clinical research, dermatology, nursing, telemedicine, palliative care, pain management, nutrition, infectious diseases, pharmacists, and academicians for a historic 2.5-day scientific event. This memorable conference was attended by 525 delegates representing 23 countries. This scientific event led to the formation of the International Society of Pediatric Wound Care (ISPeW) with the aim of raising awareness with regard to pediatric wound care and to assemble a coalition of like-minded individuals to address this pressing problem. The overarching goals of the International Society of Pediatric Wound Care (ISPeW) are to:

- (1) set global standards for the assessment and treatment of pediatric wounds of varying etiologies;
- (2) provide a forum for international interprofessional collaboration among healthcare professionals, researchers, educators, and industry leaders dedicated to the care of pediatric wounds;
- (3) promote and support clinical research focused on the prevention, assessment, and treatment of pediatric wounds;
- (4) collaborate with wound care organizations worldwide on pediatric wound care issues; and
- (5) provide evidence-based pediatric wound care education to healthcare professionals, parents, and lay caregivers.

The society's first president, Dr. Guido Ciprandi, has been a driving force of the society, and since its inception in 2011, the society held subsequent meetings, where a cohort of multidisciplinary professionals gathered to discuss advances in pediatric wound care. In 2013, the interannual ISPeW meeting was held in Miami, Florida, organized by the local chairman Dr. Robert Kirsner. In 2014, the second annual meeting was again hosted by Dr. Ciprandi and his team in Rome, Italy. Over 300 delegates from a wide array of disciplines, including physicians, nurses, and ancillary staff attended

Figure 1. The Board of the International Society of Pediatric Wound Care. (Left to right) Marco Romanelli (Italy), Kate Bernabe (United States), Akita Sadanori (Japan), Giorgio LaScala (Switzerland), Sundeep Keswani (United States), Anna Barbra Schluer (Switzerland), Guido Ciprandi (Italy), Corrado Durante (Italy), Elia Ricci (Italy), Jackie Denyer (United Kingdom), Timothy King (United States), Amulya Saxena (United Kingdom), and Kara Shah (United States).

the 2-day meeting with speakers from around the world representing over 20 countries (Fig. 1). The conference covered the full gamut of pediatric wound care. The keynote speaker was Dr. Amit Gefen, a bioengineer from Tel Aviv, Israel, who gave an inspiring talk about the role of bioengineering and innovative concepts in preventing pediatric pressure ulcers. The next meeting will be in 2016 in partnership with the World Union of Wound Healing Societies organized by Dr. Marco Romanelli, a founding member of ISPew. The 2017 third annual meeting will be in New Orleans, Louisiana, organized by Dr. Sundeep Keswani.

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In summary, the International Society of Pediatric Wound Care was developed to fulfill this mission

statement: Working together we can elevate the standard of wound care delivered to vulnerable pediatric patients through research, development of age appropriate, skin safe, and effective products, education, and evidenced-based practice guidelines. For more information about the society, membership, and upcoming meetings, please go to www.ispew.org.

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Abbreviations and Acronyms

ISPeW = international society of pediatric wound care