

SURGICAL ANNUAL RESEARCH DAY

2023



Agenda

- **Opening remarks**
- **SESSION 1**
 - Overview of Research in Pediatric Surgical Specialties
 - Research Operations: How Can We Help With Your Research?
 - Sidra Advance Diagnostic Core Facilities: Science as a Service
 - Presentation of submitted research projects
- **SESSION 2**
 - Introduction to Quality Improvement
 - How to conduct a Quality Improvement (QI) project at Sidra?
 - Presentations of selected QI projects / audits
- **SESSION 3**
 - Award presentations for 1st place for research and QI projects

First Surgical Annual Research Day

1st Surgical Annual Research Day (SARD) 2023



Organizing Committee for SARD 2023
Ms. Maha Gharib, Ms. Pascale Issa, Dr. Mansour Ali, Dr. Noora Al-Shahwani,
Dr. Talal Ibrahim, and Dr. Mitchell Stotland



In a noteworthy initiative to foster collaboration and knowledge exchange, Surgery Department's Surgical Annual Research Day (SARD) 2023 brought together medical professionals and researchers from various disciplines. The acronym SARD, derived from the Arabic term meaning "narrating," aptly reflects the event's objective of facilitating the exchange of valuable information. The event was facilitated under the lead of **Dr. Mansour Ali, Executive Chair of Surgery**, **Dr. Noora Al-Shahwani, Clinical Lead for Research Surgery Department and Asst. Program Director for General and Thoracic Pediatric Surgery Fellowship**, and **Dr. Talal Ibrahim, Division Chief of Orthopedic Surgery**.

SARD 2023 served as a platform for multidisciplinary discussions, emphasizing the significance of sharing insights and expertise in the field of surgery. The event highlighted the diverse processes involved in surgical research while showcasing the resources available at Sidra Medicine to support and encourage advancements in the domain.

As one of the leading medical institutions, Sidra Medicine continues its commitment to promoting innovation and collaboration in healthcare. The Surgical Annual Research Day plays a crucial role in furthering these goals by providing a space for professionals to engage in meaningful dialogue, share their experiences, and explore opportunities for collaborative research.



Session 1



Dr. Noora Al Shahwani

Attending Surgeon
General and Thoracic Surgery
Sidra Medicine

Current Status of Clinical Research in Pediatric Surgical Specialties

Objectives

- Aim of Surgical Annual Research day (SARD)
- Obstacles to research in surgery
- What is the international trend in research in pediatric surgical specialties?
- Research output in Surgery at Sidra
- Future directions



Ms. Lara Djansezian

Project Manager
Project Management Office
Sidra Medicine

Research Operations: How Can We Help With Your Research?

Objectives

- Explain the mission and purpose of Sidra's PMO in supporting the organization's project delivery.
- Highlight how the PMO manages the full lifecycle of projects at Sidra, ensuring projects are delivered on time, within budget, and meet objectives.
- Showcase how the PMO provides centralized project reporting and communication to stakeholders and leadership for transparent oversight.
- Illustrate the PMO's role in resource planning and optimization to allocate and manage resources efficiently for project success.
- Emphasize the PMO's work in bridging researchers, clinicians, and operational teams to facilitate collaboration and communication.



Dr. Stephan Lorenz

Director
Integrated Genomics Services
Sidra Medicine

Advanced Diagnostic Core Facilities

Objectives

- Promote synergy between research and clinical care by integrating cutting-edge diagnostic technologies with patient treatment.
- Showcase the role of core facilities housing advanced equipment and staffed by experts to support collaborative multidisciplinary research.
- Highlight how advanced diagnostics leveraging next-generation technologies like genome sequencing, proteomics, and multi-omics improve the understanding of disease etiology.
- Demonstrate how these facilities support personalized therapies, such as stem cells and gene therapy, enabling advanced therapeutic delivery and clinical trials.
- Emphasize the creation of centralized biorepositories for patient biospecimens and clinical data to facilitate future research efforts.

A photograph of a modern building with a curved facade made of horizontal wooden slats and large glass windows. Green foliage is visible on the right side of the building.

RESEARCH PRESENTATIONS

Establishing a regional pediatric facial palsy MDT - Preliminary results of facial reanimation

Dr. Graeme Glass, Melissa Toon, Julie Melville
Plastics & Craniofacial Division and Occupational Therapy

Presentation Summary:

- Facial palsy is a neurological condition defined by weakness or paralysis of the facial muscles, predominantly resulting from temporary or permanent facial nerve impairment. This condition manifests in diverse presentations, affecting either partial regions or an entire side of the face, with significant repercussions for ocular and oral motor functions.
- Current clinical approaches address both acute and long-standing forms, with surgical eligibility based on etiology and patient factors. Objective evaluation utilizes standardized facial grading systems (Sunnybrook FGS, House Brackmann), patient-reported outcome measures, synkinesis assessment, and video analysis techniques.
- Emerging research focuses on the integration of psychosocial metrics, advanced video documentation, and artificial intelligence for quantitative facial movement assessment post-reanimation surgery.
- Ongoing awareness efforts, exemplified by Facial Palsy Awareness Week, underscore critical gaps in care and advocate for comprehensive treatment and support for affected individuals.



NEONATAL CLEAN INTERMITTENT CATHETERISATION IN SPINA BIFIDA

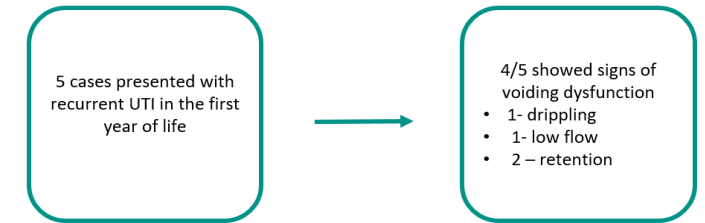
Dr. Kholoud Alabassi
Urology Division

Presentation Summary:

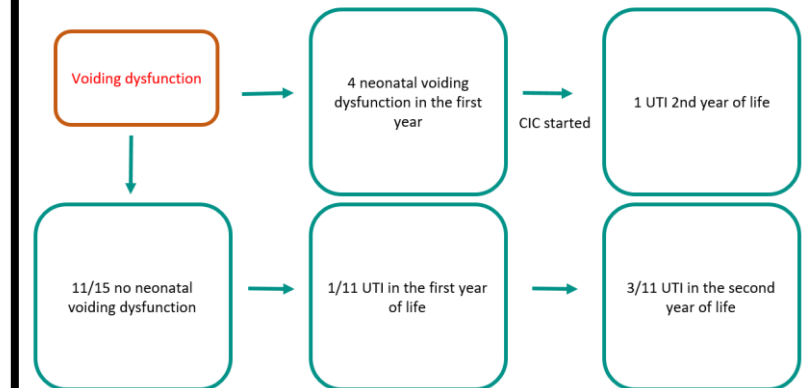
- Myelomeningocele (MMC) are either initiated in a Clean intermittent catheterization (CIC) program as part of proactive management or a reactive management. The goal is to avoid UTIs, and renal scarring.
- The aim is to analyze multiple perinatal factors that can serve as red flags of a patient who later on can develop signs of bladder dysfunction in the first 2 years of life.
- Neonatal voiding dysfunction alone can be considered a red flag to initiate proactive management in these patients in the first year of life. And further observation is needed for the second year of age.

Results:

- Total Number of patients operated : 20 (5 were excluded)
- New total number of patient included: 15 (All underwent MMC correction)



Results:



Clinical profile of ovarian cysts and predictors of ovarian torsion in girls: Sidra Experience

Dr. Sajad Wani
General and Thoracic Surgery Division

Presentation Summary:

- Ovarian pathology is common in children. Presentation is nonspecific and poor specificity of laboratory and radiological tests for the diagnosis of ovarian torsion. Early diagnosis is important to reduce/ prevent the risk of ovarian torsion and hence loss of ovary.
- The aim is to analyze the clinical profile of ovarian pathology and to establish predictors of ovarian torsion in children.
- Data was collected retrospectively one by one patient including clinical profile, laboratory findings, ultrasonography (us) findings, operative findings.
- Included patients are children up to 18 years of age with ovarian pathology including ovarian cyst with rupture and without rupture, hemorrhagic cyst, ovarian torsion; were included in this study.
- Incidence of ovarian cyst and torsion in girls in Qatar is high (14/10000 girls-year Ovarian torsion Ours 7.5 in 100000).
- Possible etiology/risk factors:
 - Genetic
 - Hormonal
 - Regional food (refrigerated food mixed with chemicals, harmonized food)
 - High BMI and obesity
- NEEDS PROSPECTIVE STUDY TO ADDRESS THESE FACTORS

Results

Table-1: Clinical profile. (n 215)

Age	range: 2months -17 yrs mean: 14 Yrs
Menarche	pre: 63(9.3%) Post 122(57.7) no information 30 (14%)
Symptoms and signs	Abdominal pain, nausea, vomiting (MC), Fever, diarrhoea, dysuria lower abdominal Tenderness, Rebound tenderness (MC), abdominal lump, abdominal guarding
BMI	High BMI in 46.5%
Labs	WBC and neutrophil count raised in most patients, CRP 30 (14%)
US findings	Cyst without torsion 179 (83.3%) mean cyst size 5.6cm and mean volume 161ml Torsion 39(16.7%)

Results

Table-2: Predictors of ovarian torsion(n 36)

variable	ovarian cyst (179)	ovarian torsion (n 36)
age	12.5yrs mean	13.6yrs mean
menarche	pre menarche 58(32.4%) post menarche 121 (67.6%)	pre menarche 5 (13.9%) post menarche 31 (86.1%)
nausea/vomiting	80 (44.6%)	25 (80.6%)
crp more than 5	17(9.4%)	13 (36%)

Advanced Intestinal Rehabilitation at Sidra Medicine (AIRS)

Dr. Saleem Mammoo
General and Thoracic Surgery Division

Presentation Summary:

- A structured intestinal rehabilitation program helps to get children of TPN with normal livers and no transplant
- Neonatal autologous bowel expansion and lengthening are clearly possible and in our opinion better than a life with bowel transplantation
- With careful monitoring of the liver and manipulation of TPN content IFALD can be prevented and treated



TOTAL NUMBER OF PATIENTS ON THE SHORT BOWEL SERVICE	42
EXCLUSIONS	
TREATMENT ABROAD	1
UNDERGOING TREATMENT AT PRESENT	5
INCLUDED IN THIS SERIES	6

LESS THEN 5 YEARS OF AGE	26
MORE THEN FIVE YEARS OF AGE BUT HAD BOWEL LENGTHENING	3

TWO GROUPS

GROUP A – WITH BOWEL LENGTHENING

Had bowel lengthening
12 patients
Average length of bowel post
resection 30.87 CMS

GROUP B – WITHOUT BOWEL LENGTHENING

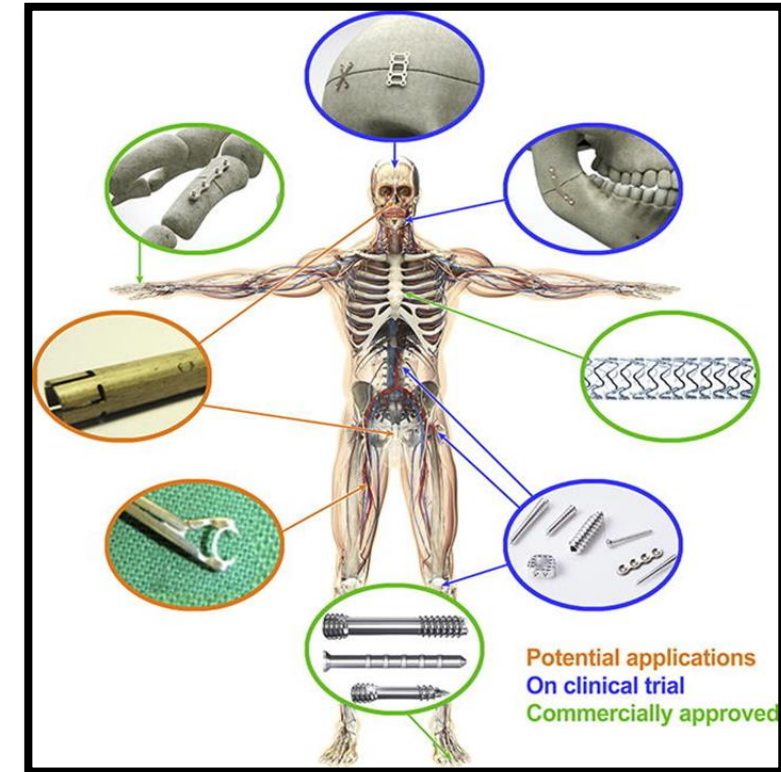
No bowel lengthening
17 patients
Average length of bowel post
resection 62 CMS

Microstructure Engineered Biodegradable Mg alloy for Orthopedic Surgery Applications

Dr. Talal Ibrahim
Orthopedic Surgery Division

Presentation Summary:

- Design criteria for biodegradable orthopedic implants:
 - Appropriate mechanical properties to temporarily support healing process.
 - Suitable corrosion resistant for progressive degradation.
 - Biocompatible to prevent cytotoxicity due to ion release.
- Development of a biodegradable Mg alloy with engineered microstructure for biomedical application – orthopaedic surgery (fracture model)
- Processing results in refined grains, uniform distribution of precipitates (reduced galvanic coupling). Processed material showed promising results – optimized corrosion rate to support bone until healing. Good osseointegration, stable corrosion rate and no inflammation or toxic products





Session 2



Dr. Reham Hassan Negm Eldin

A. AED HHQI
HMC

Introduction to Quality Improvement

Objectives

- Quality = What is Does it mean ?
 - Healthcare Quality
 - Quality in HMC
- What is QI?
- The system of profound Knowledge
- Intro to Model for Improvement and PDSA



Quality Improvement Projects

Mr. Rami Mchawrab, CPN, BSN, Master
Degree Health Care & Quality Management

Sidra Medicine

Objectives

- To gain an understanding of what quality improvement is?
- To be familiar with STEEEP approach and SMART projects.
- Know the 3 core questions about the model of quality improvement.
- Understand Common approaches to Quality improvement models (PDSA).
- Understands one of the Quality improvement tools (Ishikawa).
- Sidra Medicine workflow to start QIP.



QI PRESENTATIONS

Outcome of Using Impregnated-gauze Soaked with Hypertonic Saline Solution in the Management of Hypergranulation Tissue in Gastrostomy Tube Insertion Sites.

Ms. Noriza Que
Pediatric Specialty Clinic

Presentation Summary:

- Gastrostomy tubes (GT) are used for the delivery of enteral feedings for children who cannot meet nutritional needs orally. GT is not perfect and comes with complications.
- According to Naiditch et al, Hypergranulation tissue (HGT) in GT insertion site is seen in 44%–68% of patients. It is characterized as excessive vascularized scar tissue developed in response to chronic irritation during the early granulation and epithelialization stages of wound healing.
- Management of HGT includes chemical cautery with silver nitrate, polyurethane foam, laser ablation, washcloth abrasion, and topical corticosteroids.
- After literature search of different evidenced based ways of managing of HGT In GT insertion sites, the institution adapted the used impregnated-gauze (IG) soaked with hypertonic saline solution (HSS) as the primary standard management of HGT in the GT insertion sites.
- Management of Hypergranulation Tissue of Gastrostomy Tube Insertion Sites with Impregnated Gauze Soaked with Hypertonic Saline Soak is Effective.

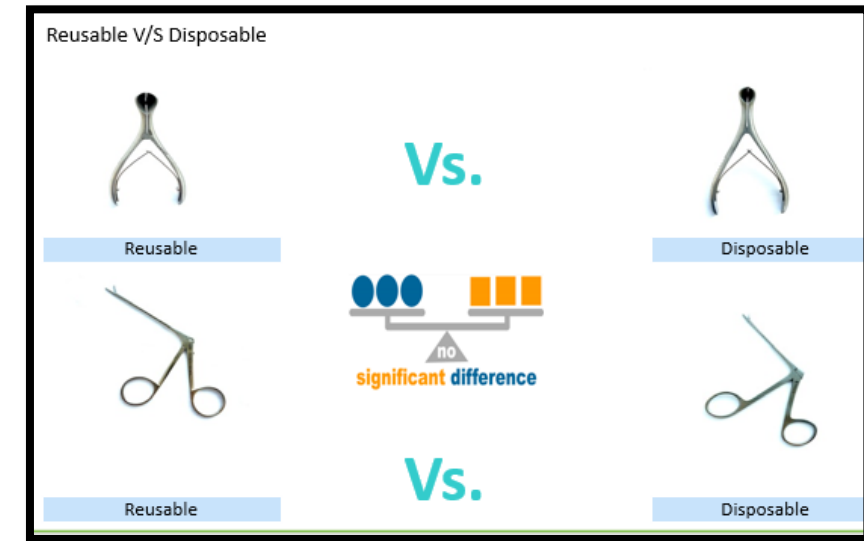
- Period of the Study:
November 2021 to December 2022
- Number of Patients:
15 (7 Females and 8 Males)
- Age Group:
6 months to 12 years of age
- Time of Improvement:
Average of 4 – 5 weeks
(Shortest period of 2 weeks and the Longest of 10 weeks)

Cost Effectiveness and Efficiency of Reusable Vs. Disposable Instruments

Mr. Raydan Sanjad
Pediatric Specialty Clinic

Presentation Summary:

- Among the surgery Clinics, ENT Clinic is having the highest turnover of patients. The clinic is doing several procedures per day with the single use Metallic instruments. As this is not making any difference in the quality of care, as a team we decided to use the budget to invest in reusable items.
- It was found by replacing the disposable instruments with the reusable instruments, we saved a significant amount of money. All the team and the division chief of ENT agreed and supported the change.
- After conducting the study, SPD allocated the reusable items to the ENT ownership. We contacted the procurement department to order the pending reusable instruments from the 2023 budget which will cost **QR 3800 only**.
- The cost saving can be utilized for a future quality and safety project, that will help to improve and expand our service.



A Review of Pediatric Tracheostomies in Sidra Medicine

Dr. Niveen Mukhtar
ENT Division

Presentation Summary:

- This retrospective study included children under 18 years of age who had a tracheostomy tube and were managed at Sidra Medicine between January 2019 and December 2022.
- Several parameters were reviewed, specifically the age at tracheostomy, the indications for the procedure, outcomes, and mortality. For each parameter, frequency and percentage calculations were performed to describe the study population and clinical results.
- This program is led by a dedicated Nurse Practitioner who provides tracheostomy care education to parents from the initial consultation. Each parent receives individualized information about the tracheostomy procedure and post-operative care, tailored to their educational background and personal circumstances.
- A competency checklist ensures that two caregivers are trained prior to discharge, in line with international standards; they must complete an average of three independent, successful demonstrations to be signed off.
- Training typically lasts two to four weeks before and after surgery, adapting to the specific needs of each family. Monthly outpatient clinic visits are scheduled for supervised tracheostomy changes until parents are confident in managing both routine and emergency scenarios at home.
- Decannulation readiness is assessed continuously from tracheostomy insertion, with follow-up evaluations every six months to determine if the decannulation process can be considered.

Outcome of post tracheostomy care

- ❑ 64 out of the 78 trachea patients are now trained. Instead of coming every 4-6 weeks in clinic, patients are now coming only once every 3-6 months for routine follow-up.
- ❑ Only 14 of our patients are still coming to our clinic for routine monthly change.
- ❑ Average monthly visit for tracheostomy clinic decreased 82.5% per month, which saves 38.4 hours clinic time per month.

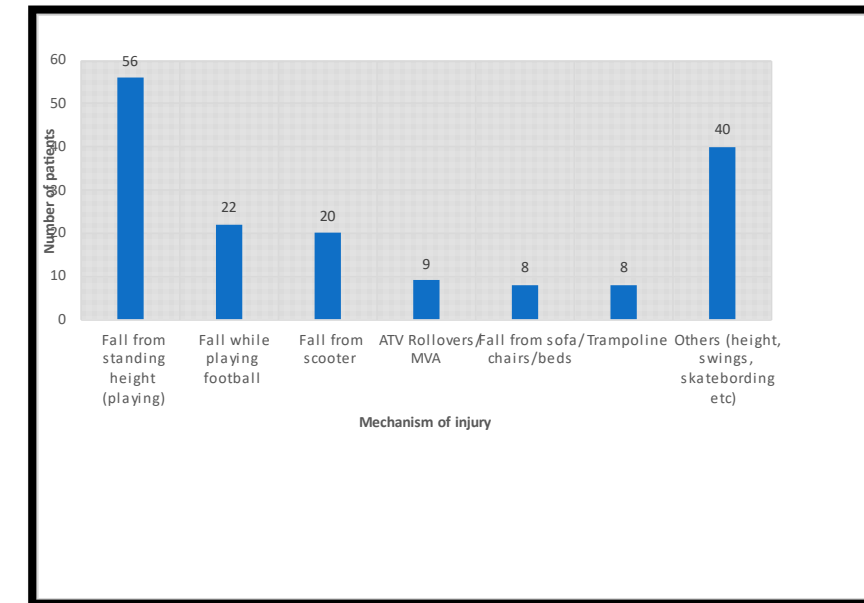


Pediatric Orthopaedic – related trauma during Qatar 2022 FIFA World Cup: Epidemiological Study

Dr. Mubashir Wani
Orthopedic Surgery Division

Presentation Summary:

- Studies have evaluated different factors affecting pediatric emergency department attendance in general.
- The Division of Orthopedic surgery at Sidra Medicine had the unique opportunity of providing pediatric orthopedic services solely during the event and acts as a primary referral center for all orthopedic related trauma in the country.
- The aim of the study is to plan for future sporting events and help other countries holding such events to prepare and optimize health resources.
- Around 2/3rd of the orthopaedic patient arrivals to emergency department are managed in ED under conscious sedation
- Dedicated pathway needs to be formulated for efficient management.





Session 3



Awards Presentation

Research Presentation Award

Dr. Talal Ibrahim

Orthopedic Surgery Division



QI PRESENTATION AWARD



Mr. Raydan Sanjad

Pediatric Specialty Clinic