



Celebrating, Looking Back and Looking Forward

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International Urogynecology Day was on 20 January and International Incontinence Day was on 14 March. For the International Urogynecological Association (IUGA), both dates are fundamental to raising awareness about the vital field of urogynecology and the tremendous impact that pelvic floor conditions have on women's health and quality of life. With the contribution from the honored professionals Dr. Harold Drutz and Dr. Donald Ostergard, the Co-Editors-in-Chief thought that this would be a good moment to bring together a brief history of the IUGA and the *International Urogynecology Journal* (IUJ).

The IUGA was formed under the direction of Axel Ingelman-Sundberg of Sweden and Jack R. Robertson, MD, of Santa Barbara, CA, USA, in 1976 at the 8th Annual Fédération Internationale de Gynécologie et d'Obstétrique (FIGO) General Assembly held in Mexico City. At that meeting nine other FIGO members were invited to participate in this event: Oscar Contreras Ortiz of Argentina, Wolfgang Fischer of East Germany, Abbo Hasson Abbo of Sudan, Bozo Kralj of Slovenia, Donald Ostergard of the USA, Eckhard Petri of West Germany, Stuart Stanton of the UK, Ulf Ulmsten of Sweden, and David Worrell of the UK. Professor Ingelman-Sundberg became the First President of this new society and Ulf Ulmsten became its Vice-President.

Most founding members were head of urogynecology units in their home countries. Notably, members represented many parts of the world including Western Europe, North and South America, as well as East Germany and Slovenia. The IUGA was truly international and it can be considered an achievement that scientifically active urogynecologists

from the former East participated in founding and developing the IUGA. Wolfgang Fischer, for example, held a position at the East Berlin Charité as Director of "Gynecological Urology" in former East Germany from 1970 to 1999. The East German urogynecological society had conducted many meetings, also including Bozo Kralj, another founding member. Interestingly, all founding members and first Editors of the IUJ were males, representing a world that has since changed beneficially in this respect.

After the IUGA was founded, Professors Oscar Contreras Ortiz and Donald R. Ostergard, founded the IUJ, "The Blue Journal," which was first self-published in 1988 by Professor Ortiz and then by Springer, where it has since remained. Oscar Ortiz was the first Editor-in-Chief and Donald Ostergard the first Managing Editor, a position he held for 17 years. The journal's ownership was donated to the IUGA by Oscar Contreras Ortiz in 1999 with help from Donald Ostergard.

"Clinical and Urodynamic Re-Evaluation of Combined Abdomino Vaginal Marlex® Sling Operations for Recurrent Stress Urinary Incontinence" by H.P. Drutz, M.E. Buckspan, S. Flax, L. Mackie in August 1987 was one of the first articles published in the IUJ [1]. There have been significant improvements in urogynecological practice since this first IUJ article, namely advances in mesh materials and in surgical techniques with the inauguration of midurethral slings, as well as focus on patient-related outcome measures. The IUJ covered this progress and published many landmark papers. In dedication to the history of the IUGA and its journal, this editorial is accompanied by the re-publication of the content of the IUJ first issue (Fig. 1).

It is by taking time to understand our past and the journey that has led us to the present that we become better equipped to plan for our future. This principle applies to our association and our journal. Therefore, it is our pleasure to salute and celebrate this journey! Recognizing the importance of understanding our past to shape a better future, the IUGA History Committee was recently created, with Prof. Mark Vierhout as the idealizer and the first chair. The establishment of a History Committee is aimed at capturing,

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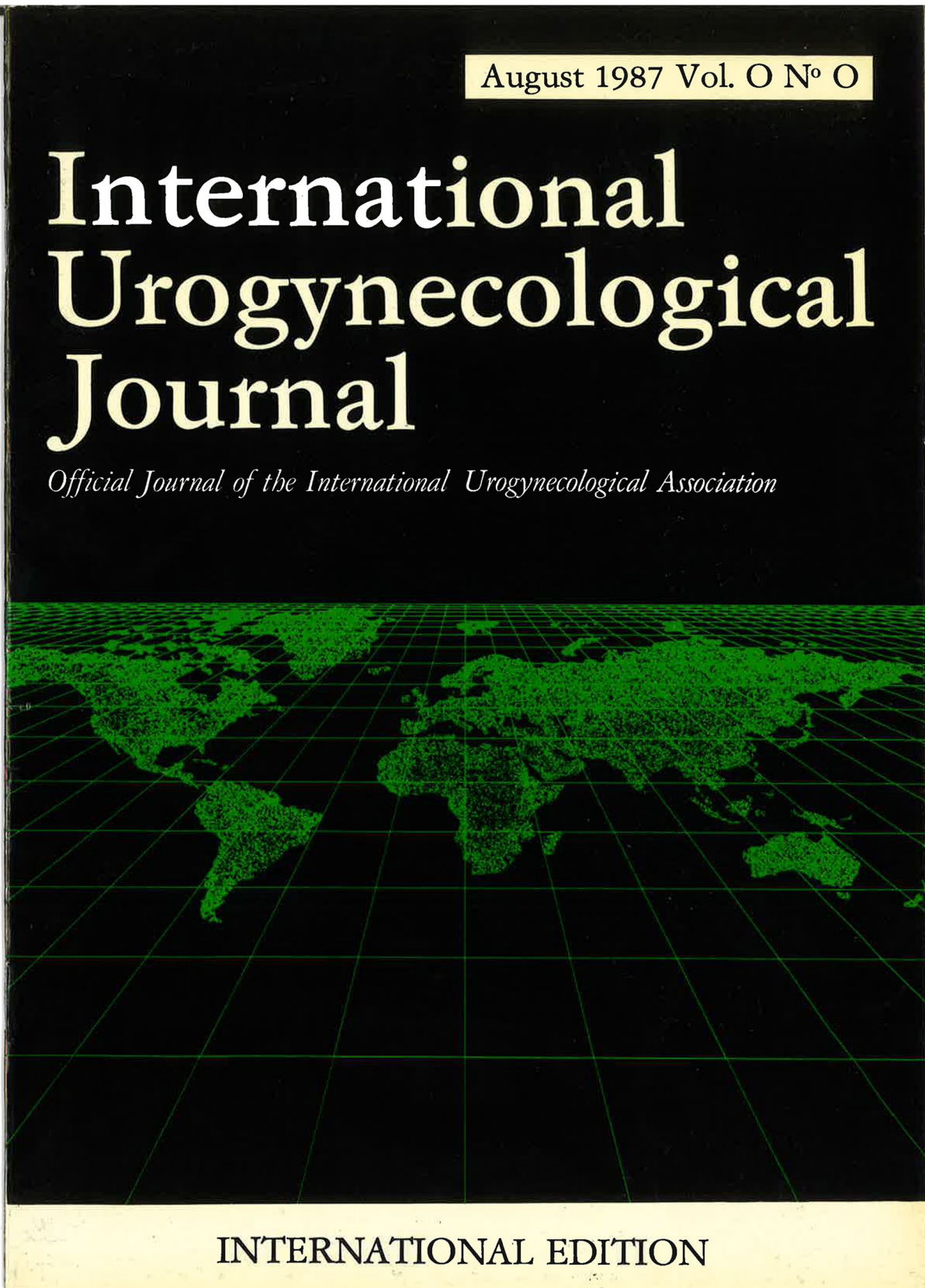


Fig. 1 Cover of the first issue of the IUJ, table of contents and first article

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Vol 0 N° 0

Anatomy. Physiology. Physiopathology.

Anatomy. Physiology. Physiopathology. 0

Therapeutics.

**H.P. Drutz, M. B. Buckspan,
S. Flax and L. Mackle**
Toronto, Ontario, Canada
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Special Contributions. 0

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Clinical And Urodynamic Re-evaluation Of Combined Abdomino-vaginal Marlex Sling Operations For Recurrent Stress Urinary Incontinence

Harold P. Drutz, M.D., F.R.C.S.(C)
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* Sesenta y cinco pacientes fueron operadas con la técnica de uretro-vesico suspensión con Marlex por vía combinada como tratamiento de la incontinencia de orina recidivada. La evaluación urodinámica consistió en estudios simultáneos de flujometría y electromiografía, cistometría con dióxido de carbono y estudios del perfil de la presión uretral, citoscopia y uretroscofia. Los promedios de cura fueron: 75% para la incontinencia de urgencia y 95,3% para la incontinencia de esfuerzo. El estudio estadístico demostró mejoría en los parámetros urodinámicos pre y post operatorios, observándose disminución en los volúmenes del flujo, aumento en la longitud funcional de la uretra, pero no en la presión de cierre uretral máxima. La capacidad vesical permaneció sin cambios.

Key Words: Combined Abdomino - Vaginal Marlex Sling, Operations, Recurrent Stress Urinary Incontinence

One of the main factors found in patients with recurrent genuine anatomical stress urinary incontinence following previous vaginal and retropubic procedures is that of pelvic scar. Occasionally such scarring is found in the absence of a history of previous surgery in patients who have received pelvic radiation or who suffer from severe atrophic changes, effectively shortening and freezing the anterior vaginal wall. Numerous sling procedures, with cure rates varying between 61 and 98%, have been described.⁶ Few reports^{1,7,8} have included both pre and post-operative clinical and urodynamic re-evaluation. This report outlines the clinical and urodynamic re-evaluation of 65 patients who underwent a combined abdomino-vaginal Marlex sling procedure.

METHODS

Clinical assessment involved a detailed history using a computerized data retrieval form and com-

plete physical examination with appropriate neurologic screening. Urodynamic evaluation consisted of uroflowmetry with simultaneous measurement of pelvic electromyographic (EMG) activity done by peri-anal surface electrodes performed on the uroflow portion of the DISA* 2100 urosystem and measurement of residual urines.

Carbon dioxide rapid fill (120 ml./min.) gas cystometry and supine static urethral pressure profiles were performed, the details of which have been described elsewhere.²

The urodynamic data was analyzed statistically by a t test.

The principles of the 2-team abdomino-vaginal approach, using a wide band of inert polypropylene mesh (Marlex)** must: 1. allow the abdominal surgeon to release the anterior scar in the space of Retzius; 2. allow the vaginal surgeon to release the posterior scar along the anterior vaginal wall; 3. adequately elevate the urethrovesical junction so that it is no longer the most dependent position at the base of the bladder neck (Figure 1).

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* DISA Elektronik A/S, DK-2740 Skovlunde, Denmark.

** Usher's Marlex Mesh, Davol Rubber Company, Providence Rhode Island.

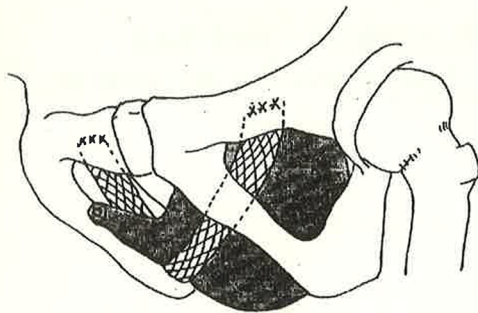


Fig. 1
 Combined abdomino-vaginal Marlex sling procedure. This is a two-team operation where the vaginal surgeon passes the Marlex mesh through tunnels created in the urogenital diaphragm into the space of Retzius where it is sutured to Cooper's ligament.

RESULTS

The 65 women were of mean age of 54.1 years (range 34-84 years), mean gravity of 3.8 (range 0-11), and mean parity of 2.98 (range 0-5). Sixty-four patients had undergone a total of 119 previous genitourinary operations (Table 1) with a mean of 1.86 operations and a range of 1 to 5 procedures. One patient who had previously received pelvic and abdominal radiation for carcinoma of the cervix had no prior genitourinary surgery.

Table I *
 Previous Surgery
 N = 64

1. TAH	=	15
2. TAH & MMK	=	4
3. TAH & BURCH	=	3
4. VH	=	1
5. VH & ant	=	11
6. VH & ANT-POST	=	19
7. ANT REP	=	25
8. ANT & POST	=	6
9. MMK	=	20
10. Burch	=	2
11. MMK & ANT	=	1
12. FOTHERGILL	=	5
13. SLING	=	1
14. V-V FISTULA	=	2
15. URETHRAL DIVERTICULUM	=	1
16. ABD VAULT SUSP	=	1
17. BLADDER NECK RES	=	1
18. PEREYRA	=	1
TOTAL = 119		
MEAN = 1.86		
RANGE = 1-5		

* See table code on page 10.

Table II lists the frequency of clinical symptoms at the time of initial assessment and at the last post-operative visit.

Table II *
 Symptoms

	PRE-OP		LAST POST-OP VISIT	
	N = 65	%	N = 64	%
URGENCY	56	86.2	29	45.3
FREQUENCY	55	84.6	8	12.5
NOCTURIA	38	58.5	6	9.4
INCONTINENCE	65	100.0	16	25.0
ENURESIS	11	16.9	2	3.1
CLS	65	100.0	3	4.7
WRSp	63	96.9	2	3.1
STAND	54	83.1	8	12.5
PADS	65	100.0	2	3.1

All patients were incontinent prior to surgery and the success rate (Table III) regarding urgency incontinence symptoms was 75.0 percent and genuine stress incontinence symptoms was 95.3 percent.

Table III *
 Success Rates

URGE INCONTINENCE	75.0%
STRESS INCONTINENCE	95.3%

Table IV shows the mean follow up of the 64 patients to be 24.2 months with a range of 1.5 to 92 months. The patient who had only one six week follow up visit was from an Indian reservation in Northern Ontario.

Table IV *
 Follow Up In Months

MEAN	24.2 MO
RANGE	2.5 - 92 MO

One 69 year old woman who had a previous Fothergill repair and also an MMK procedure died on her second post-operative day from a massive pulmonary embolism.

Nonhealing of the anterior vaginal wall with exposure of the Marlex mesh was noted in four women. In all cases the exposed mesh was removed and the patients have remained continent.

One of our early cases, a 47 year old having had a previous vaginal hysterectomy and anterior repair and subsequent MMK, we obviously pulled too tight and she required a transurethral resection of some exposed mesh at her bladder neck subsequent repeated dilatations. Presently 92 months from the time of her surgery she is continent and voids well on her own.

A 69 year old woman with a previous Fothergill repair continued to have significant genuine stress incontinence eight months after our operation and had a second Marlex sling procedure done at another centre.

Two patients both known to have spinal stenosis continue to require periodic self-catheterizations but are otherwise continent.

No fistulas were observed in this series.

Table V outlines the uroflowmetry parameters measured pre-operatively and at the first post-operative visit (usually 6-12 weeks after surgery) and the last post-operative visit. The only statistically significant change seen in all uroflow parameters measured was in the pre and post-operative volumes voided.

Table V *

Uroflowmetry

	PRE-OPERATIVE	FIRST POST-OPERATIVE VISIT	LAST POST-OPERATIVE VISIT
VOLUME VOIDED cc	409 *P < 0.001 (63-982)	242.58 (7-622)	276.54 (23-631)
PEAK FLOW ml/sec	25.9 (4.0-52.0)	14.23 (1.5-59.8)	14.99 (3.6-44.2)
MEAN FLOW ml/sec	11.37 (1.6-23.1)	6.08 (0.8-32.8)	5.89 (0.6-17.4)
VOIDING TIME sec	42.0 (8.0-110)	44.76 (4.0-125)	54.28 (11-194)
RESIDUAL cc	88.9 (5-600)	125.73 (0-900)	128.64 (15-920)
TIME TO PEAK FLOW sec	10.9 (3-30)	11.0 (2-80)	9.17 (3-40)

In view of the fact that pre and post-operative bladder capacities (Table VI) did not statistically

* See table code on page 10.

change, the significance of the change in volumes voided is suspect. Peak flow and mean flow appear to be reduced following surgery but because of the wide range of values, these changes were not statistically significant. In a similar fashion, residual urines appear to definitely increase following surgery, but the wide range of values precludes statistical significance.

Cystometric changes (Table VI) show no significant changes in bladder capacity but a significant delay in the first desire to void (FDV) following surgery.

Table VI *

Cystometry

	PRE-OP	POST-OP
CAPACITY ml	369.69 (75-700)	322.07 (75-450)
FIRST DESIRE TO VOID ml	82.42 (0-200)	132.22 *P < 0.001 (25-400)

Urethral Pressure Profilometry (U.P.P.) (Table VII) showed a statistically significant increase in functional urethral length following surgery, but no such change in the maximum urethral closure pressure (M.U.C.P.).

Table VII *

Urethral Pressure Profilometry

	PRE-OP	POST-OP
FUNCTIONAL LENGTH cm	2.14 (1.0-4.1)	2.95 *P < 0.001 (1.4-4.9)
M.U.C.P. cm H ₂ O	40.36 (10-90)	33.39 (8-73)

COMMENT

The majority of patients presented with mixed lower urinary tract symptoms (Table II). All patients complained of incontinence with coughing, laughing, sneezing, and all were socially incapacitated enough to require constant protection. As we have reported previously,³ the multitude of presenting symptoms confirms mixed urodynamic findings, such as genuine sphincter weakness incontinence, sensory urgency, large and small bladder capacities (range 75-700 cc.)

Fig. 1 (continued)

(Table VI), and normal to extremely large residual urines (5-600 cc.) (Table V). Thus we are pleased with a success rate of 95.3% in genuine stress urinary incontinence symptoms and consider a 75% success rate in urgency incontinence symptoms acceptable. It is important to explain to the patient with mixed pre-operative findings that not all her lower urinary tract symptoms may be alleviated by her surgery despite the fact that she has a 95% chance of no longer losing urine with increases in intra-abdominal pressure.

The functional length and maximum urethral closure pressure tend to decrease with age, and are lower in patients suffering from genuine sphincter weakness incontinence than incontinent women.¹⁰

We found the only statistically significant change in the U.P.P. post-operatively, was an increase in the urethral functional length. This change has been described by other authors,^{5,9} but no physiologic explanation has so far been given for the increase in urethral functional length after a successful operation. What most likely occurs is that a successful operation repositions the urethrovesical junction and bladder base into an intra-abdominal position and thereby lengthens and stretches the urethra.

We did not find a significant change in the M.U.C.P. post-operatively, and in fact there was a slight decrease but this change was not statistically significant. Other authors⁹ who reported similar findings suggested that this was caused by injury to the vascularity of the urethra during the operation.

Post-operative uroflowmetry shows a decrease in urinary peak flow and mean flow, and an increase in residual urines in comparison with studies in the same patients pre-operatively. These values, although not statistically significant because of the wide range of values and relatively small population size, seem to persist from the first to the last post-operative evaluation.

We feel that this procedure offers excellent results in selected cases. Success rates will vary with the nature of the pre-existing problem and will be the highest where simple genuine recurrent stress incontinence was the predominant pre-operative problem. There is an obvious need for objective pre and ongoing post-operative urodynamic evaluation.

Tables

I PREVIOUS SURGERY Code: TAH = total

abdominal hysterectomy;
MMK = Marshall Marchetti Krantz;
VH = vaginal hysterectomy;
ANT = anterior colporrhaphy;
POST = posterior colporrhaphy;
ABD = abdominal; SUSP = suspension;
RES = resection;
V-V FISTULA = vaginal fistula

II SYMPTOMS Code: CLS = cough, laugh, sneeze;
WRSp = walk, run, sport;
STAND = standing

III SUCCESS RATES

IV FOLLOW UP

V UROFLOWMETRY * = statistically significant using STUDENTS t Test

VI CYSTOMETRY

VII URETHRAL PRESSURE PROFIOMETRY (U.P.P.)

Code: M.U.C.P. = maximum urethral closure pressure

REFERENCES

1. Bryans, F.E.: Marlex gauze hammock sling operation with Cooper's ligament attachment in the management of recurrent urinary stress incontinence. *Am. J. Gynecol.* 133:292, 1979.
2. Drutz, H.P., Shapiro, B.J., and Mandel, F.: Do static cystourethrograms have a role in the investigation of female incontinence? *Am. J. Obstet. Gynecol.* 130:516, 1978.
3. Drutz, H.P., and Mandel, F.: Urodynamic analysis of urinary incontinence symptoms in women. *Am. J. Obstet. Gynecol.* 134:789, 1979.
4. Hendriksson, L. and Ulmsten, J.: A urodynamic evaluation of the effects of abdominal urethrocystopexy and vaginal sling urethroplasty in women with stress incontinence. *Am. J. Obstet. Gynecol.* 113:78, 1978.
5. Hilton, P. and Stanton, S.C.: Clinical and urodynamic evaluation of the polypropylene (Marlex) sling for genuine stress incontinence. *Neurourology and Urodynamics.* 2:145, 1983.
6. Hohenfellner, R. and Petri, E.: Sling procedures. In Stanton, S.L., Tanagho, E.A. (eds): *Surgery of Female Incontinence.* Berlin: Springer-Verlag, 69: 1980.
7. Morgan, J.E.: A sling operation using Marlex polypropylene mesh, for treatment of recurrent stress incontinence. *Am. J. Obstet. Gynecol.* 106:369, 1970.
8. Morgan, J.E., and Farrow, G.A.: Recurrent stress urinary incontinence in the female. *Br. J. Urol.* 49:37, 1977.
9. Obrink, A. and Bunne, G.: The margin of incontinence after 3 types of operations for stress incontinence. *Scand. J. Urol. Nephrol.* 12:209, 1978.
10. Rud, T.: Urethral pressure profile in continent women from childhood to old age. *Acta Obstet. Gynecol. Scan.* 59:331, 1980.

10 Drutz et al. *Clinical Urodynamic Re-evaluation*

preserving, and promoting the rich history of urogynecology and the contributions of IUGA.

The combined success of both the IUGA and the IUJ in working harmoniously has helped to make the IUGA a leading international society devoted to clinical and basic science research in the advancement of female pelvic medicine. Many national urogynecological societies have chosen to be affiliate members of the IUGA. The IUGA has become an interdisciplinary and multidisciplinary society devoted to treating the "whole" pelvic floor in women and similarly, the IUJ emerged as a truly international and inclusive journal addressing pelvic floor dysfunction globally. The IUJ is dedicated to inclusivity and diversity in patient care and recognizes different needs and situations around the world. It is also home to contributions from diverse fields, including urology, gynecology, physiotherapy, nursing, and bioengineering. Both the IUGA and IUJ continue to address female pelvic floor disorders including urinary and fecal incontinence and pelvic organ prolapse, as well as urinary tract infections, pelvic pain, and the multidisciplinary nature of urogynecology involving, for example, urology, gynecology, physiotherapy, nursing, imaging, and bioengineering.

Maria Bortolini and Kaven Baessler, as current Co-Editors-in-Chief, welcome original research, reviews, and clinical opinions from authors around the globe to provide innovative, comprehensive, and best practice information. With new Fellows and Social Media Editors we also commit to involving and supporting junior and early-career health care professionals.

Although the content of the IUJ and its Editors remain independent of the IUGA, it is the official journal of the IUGA and promotes women's health worldwide. It is our sincere hope that you all enjoy reading and learning from the IUJ.

References

1. Drutz HP, Buckspan M, Flax S, et al. Clinical and urodynamic re-evaluation of combined abdominovaginal Marlex sling operations for recurrent stress urinary incontinence. *Int Urogynecol J.* 1990;1:70–3. <https://doi.org/10.1007/BF00600023>.

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