Clinical practice

Short-IPGH system for assessment of pelvic floor disease

BRUCE FARNSWORTH (*) - GIUSEPPE DODI (**)

(*) Centre for Pelvic Reconstructive Surgery, Sydney Adventist Hospital, Sydney, New South Wales, Australia
(**) Department of Surgery, Clinica Chirurgica 2. University of Padua, Padua, Italy

Abstract: A simple clinical tool is presented to quantify and record pelvic floor disease. The short-IPGH system enables the clinician to document a summary of the clinical status of a patient. This system creates a clinical record with the details of a complex history and examination. It is particularly helpful when reviewing a previous assessment or reporting a patient's status to a colleague. The short-IPGH is made up of four domains which cover the basics of a pelvic floor evaluation. The data is recorded in a standard proforma which enables rapid assessment of the clinical situation. The original IPGH system was designed to process a large amount of objective data in a research environment. The short-IPGH breaks down complex data sets to create a smaller number of scoring systems that are clinically useful in everyday practice.

Key words: Pelvic floor; Clinical record; Prolapse; Incontinence; Retention.

INTRODUCTION

When assessing pelvic floor problems, clinicians should make a balanced evaluation of any dysfunction which takes into account all three pelvic compartments in addition to any general medical conditions including the consequences of neurological disease. A number of systems have been devised to analyse, diagnose and quantify pelvic dysfunction. Universally, these systems are comprehensive in their attention to detail but are usually confined to one or two functional parameters or body compartments. Pelvic floor problems are often complex and can involve multiple systems, leading to the collection of large amounts of data. While helpful as a research tool, the collation and interpretation of this data is impossible in everyday clinical practice.

The IPGH system was developed in Italy and first published in 1996.[1] It is a complex tool which is designed to take a global view of pelvic floor dysfunction and to enable the clinician to quantify the problem at hand and then verify the success or failure of any intervention. The IPGH was originally designed to be used to organise data collected in medical research. In contrast, the short-IPGH is designed specifically to be used as a tool in everyday practice. The original system is based on existing validated and partially validated classification systems. In the anterior compartment there has been a lot of work to develop standardised terminology.[2, 3] The POPQ System [4] has been advocated to quantify prolapse whilst the Wexner scales [5] are popular systems for grading rectal dysfunction. Where possible, we have tried to adopt standard methods of assessment into the short-IPGH but this is not always feasible as the final system must be equally accessible and able to be interpreted by different groups of clinicians.

The short-IPGH is a practical tool for any clinician working in pelvic medicine or surgery. This modified system is designed to take the normal detailed assessment made by the pelviperineologist, whether he or she is a urologist, geriatrician or other specialist and then summarise the findings in a standardised multidisciplinary format. It can be used to track the progress of a particular patient without needing to review each detailed clinical assessment and it can be used to record and then present the summary of a patient to a colleague.

Each clinician has the freedom to decide what specific tools he or she will use to make an assessment of a particular parameter but then the results need to be quantified and recorded using the short-IPGH format. In some areas where there is a definite established system, the international standard will be used e.g., the POPQ ordinal system for staging genital prolapse. Pain is assessed using a Visual Analogue Scale (1-10). Clinicians who use the Wexner or similar scales for assessing rectal function can extrapolate the results to give a score between 1 and 4.

METHODS

In the original IPGH system information is presented as a table which can be completed by the physician using a detailed data collection sheet or entered directly into a computerised algorithm.[6, 7]

The short-IPGH enables the clinician to summarise and record clinical data in a standardised format. Like the original IPGH system the short-IPGH comprises four domains where "I" represents Incontinence, "P" Pelvic floor and Prolapse, "G" General factors and "H" Handicap. The assessment can then be recorded on a four-section table (Tab. 1).

SECTION 1: INCONTINENCE

Data sets used in the assessment of incontinence are listed with a detailed explanation of each parameter in Table 2.

TABLE 1. – *The short-IPGH system.*

I	Ui = 0–3 Uid = yrs ur = 0–3 Uiy = 0–1 Uir = n pd = n Uiqol = 0–3 Fi = 0–3 Fid = yrs Fiy = 0–1 Fir = n Fiqol = 0–3
P	V Vd = yrs a = 0–4 p = 0–4 s = 0–4 e = 0–4 Vr = n Vqol = 0–3 L = 0–3 Ru=0–3 Rud = yrs Rur = n Ruqol = 0–3
	A Ad = yrs h = 0–4 m = 0–4 r = 0–4 ed = 0–4 rc = 0–2 Ar = n Aqol = 0–3 C = 0–3 Cd = yrs Cr = n Cqol = 0-3
	Gn = 0–1 x = 0–1 Py = 0-1 PCT = 0-3 Prel = 0–2
G	G = 0-3 Men = 0–3 Mob = 0–3 S = N/0–3
H	H = max qol (0–3) P_{VAS} = 0–10 D = n

A series of unique abbreviations are used to record the data in each of these sections.

TABLE 2. – *Incontinence*.

I	Ui = 0–3	Uid = yrs	ur = 0–3	Uiy = 0–1	Uir = n	pd = n	Uiqol = 0–3
	Fi = 0–3	Fid = yrs	Fiy = 0–1	Fir = n	Fiqol = 0–3		

A detailed explanation of each section of the chart is provided in Table 3.

Example: A 63 yr woman Para 3 Gravida 3, has a 10-year history of severe stress urinary incontinence with no urgency. The incontinence has a significant impact on quality of life, using 3 incontinence pads each day. She has failed physiotherapy and has undergone 3 incontinence procedures to try and correct the problem. This patient also had mild faecal incontinence for 1 year with minimal impact on quality of life (Tab. 4).

SECTION 2: PELVIC FLOOR/PROLAPSE

Pelvic floor and Prolapse (P) is divided into three sections. Pelvic floor and Prolapse also includes vaginal (V) and anorectal (A) sections. Each assessment for genital prolapse is recorded as Stage 1, 2, 3 or 4 where the stages of prolapse are equivalent to POPQ ordinal system stages. Anorectal prolapse is also quantified using a 4-stage description. It is a more dynamic description which also takes into account irreducibility of the involved viscera. An examination of the Genitalia (Gn) is recorded together with hysterectomy (x), previous conservative therapy (Py) and pelvic muscle function (PCT, Prel) (Tab. 5).

Detailed descriptions of the components of this assessment are listed in Table 6.

Example: An example of a prolapse assessment is shown below (Tab. 7). This patient has a Stage 2 cystocoele but no posterior, superior or vaginal Pouch of Douglas prolapse (enterocoele). The vaginal prolapse has been evident for 3 years. This is a recurrent prolapse and

TABLE 3. – *Detailed components of incontinence assessment*.

I	Incontinence
Ui	Urinary incontinence graded 0–3: where 0 = absent, 1 = light (occasional, no protection), 2 = moderate (need for protection) and 3 = severe (continuous).
Uid	Urinary incontinence duration Duration in years
ur	Urgency Graded 0 = absent, 1 = mild, 2 = moderate, 3 = severe
Uiy	Previous conservative therapy for urinary incontinence Uiy = 0 or 1 where 0 = no 1 = yes
Uir	Recurrent urinary incontinence Uir = n where n is the number of previous operations for urinary incontinence
pd	Pad usage Number of incontinence pads used each day (average)
Uiqol	Impact of urinary incontinence on quality of life 0 = no impact, 1 = minimal or occasional impact, 2 = moderate impact and 3 = severe impact on qol
Fi	Faecal incontinence graded 0–3: where 0 = absent, 1 = light (occasional, no need for protection), 2 = moderate (need for protection) and 3 = severe (continuous)
Fid	Faecal incontinence duration Duration in years
Fiy	Previous conservative therapy for faecal incontinence Fiy = 0 or 1 where 0 = no 1 = yes
Fir	Recurrent faecal incontinence Fir = n where n is the number of previous operations for faecal incontinence
Fiqol	Impact of Faecal incontinence on quality of life 0 = no impact, 1 = minimal or occasional impact, 2 = moderate impact and 3 = severe impact on qol.

TABLE 4. – *Sample incontinence record 63 yr Para 3 Gravida 3*.

I	Ui3	Uid10	ur0	Uiy1	Uir3	pd3	Uiqol3	Fi1	Fid1	Fiy1	Fir0	Fiqol1

TABLE 5. – *Prolapse Assessment*.

P	V	Vd = years	a = 0–4	p = 0–4	s = 0–4	e = 0–4				
		Vr = n	Vqol = 0–3	L = 0–3	Ru = 0–3	Rud = yrs	Rur = n	Ruqol = 0–3		
	A	Ad = years	h = 0–4	m = 0–4	r = 0–4	ed = 0–4	rc = 0–2	Ar = n	Aqol = 0–3	
		C = 0–3	Cd = yrs	Cr = n	Cqol = 0–3					
	Gn = 0–1	x = 0–1	Py = 0–1	PCT = 0–3	Prel = 0–2					

TABLE 6. – *Components of prolapse assessment*.

P	Prolapse
V	Vaginal prolapse
Vd	Duration of vaginal prolapse years
a	Anterior (cystocoele) Stage 0 = absent, Stage 1–4 = POPQ 1–4
p	Posterior colpocoele (recto vaginal septum) Stage
	0 = absent, Stage 1–4 = POPQ 1–4 *Note: This is the clinical appearance of a posterior vaginal wall bulge, due to a defect in the rectovaginal septum. The presence or abscence of a rectocele is a clinical diagnosis made by performing a digital rectal examination and is recorded in the anorectal section below.*
s	Superior (vault/uterus) Stage 0 = absent, Stage 1–4 = POPQ 1–4
e	Enterocoele (small bowel into vagina) Stage 0 = absent, Stage 1–4 = POPQ 1–4
Vr	Recurrent vaginal prolapse Vr = n where n is the number of previous operations for vaginal prolapse
Vqol	Vaginal prolapse impact on quality of life Grade 0 = absent, 1 = mild, 2 = moderate, 3 = severe
L	Latent urinary incontinence 0 = absent, 1 = appears when straining with full bladder or 2 = after the reduction of any genital prolapse, 3 = both 1 and 2
Ru	Retention of urine Ru = 0–3 where 0 = nil, 1 = minimal problem, 2 = difficult start of micturition / use of abdominal pressure / incomplete voiding, 3 = complete retention and/or need for catheterisation
Rud	Retention of urine Duration in years
Rur	Retention of urine Previous surgery n = number of procedures
Ruqol	Retention of urine impact on quality of life Grade 0 = absent, 1 = mild, 2 = moderate, 3 = severe
A	Anorectal prolapse
Ad	Duration of anorectal prolapse years
h	Haemorrhoids 0 = absent, 1 = internal, 2 = reduce spontaneously, 3 = reduce manually, 4 = irreducible
m	Rectal mucosal prolapse 0 = absent, 1 = internal, 2 = reduce spontaneously, 3 = reduce manually, 4 = irreducible
r	Rectal full thickness prolapse 0 = absent, 1 = internal (intussusception), 2 = reduce spontaneously, 3 = reduce manually, 4 = irreducible
ed	Edrocele Stage 0 = absent, 1 = internal, 2 = reduce spontaneously, 3 = reduce manually, 4 = irreducible
rc	Rectocele Stage
	0 = absent, 1 = low rectocoele involving the perineal body only, 2 = high rectocoele, involving the rectovaginal septum. *Note: rectocele is defined as a herniation of the rectum above the anal canal. It is diagnosed clinically from the rectum wheras the clinical diagnosis of vaginal posterior prolapse or colpocoele is reported above (A p) and (Ae). A high rectocoele must be distinguished from a low rectocoele in combination with an enterocoele.*
Ar	Recurrent anorectal prolapse Ar = n where n is the number of previous operations for anorectal prolapse
Aqol	Anorectal prolapse impact on quality of life Grade 0 = absent, 1 = mild, 2 = moderate, 3 = severe
C	Constipation (unsatisfactory defaecation with retention of stools) 0 = absent, 1 = mild constipation, 2 = moderate constipation, 3 = severe, 4= very severe. *Note: In the absence of an objective tool the assessment of constipation simply becomes another measure of quality of life. We recommend the use of the Wexner score*[6, 7] *to provide an objective measurement tool (Appendix 2).* *Wexner score 0–5 = mild, 6–11 = moderate, 11–15 = severe, 16–30 very severe*
Cd	Duration of constipation Years
Cr	Previous surgery for constipation Cr = n where n is the number of previous operations for constipation
Cqol	Constipation impact on quality of life Grade 0 = absent, 1 = mild, 2 = moderate, 3 = severe
Gn	External genitalia 0 = normal, 1 = abnormal
x	Hysterectomy x = 0 or 1 where 0 = no, 1 = yes
Py	Previous conservative therapy for prolapse Py = 0 or 1 where 0 = no, 1 = yes
PCT	Pubococcygeus contraction test Patient is asked to squeeze on two fingers placed in the vagina or one finger in the anus to assess PC strength 0 = no contraction, 1 = minimal contraction, 2 = weak contraction, 3 = strong contraction
Prel	Pelvic floor muscle relaxation at straining Prel = 0–2 where 0 = pelvic relaxation, 1 = no relaxation, 2 = paradox contraction

TABLE 7. – *Example of prolapse assessment.*

P	Vd3	a2	p0	s0	e0	Vr3	Vqol2	L0	Ru3	Rud4	Rur = 0	Ruqol3
	Ad0	h0	m0	r0	ed0	rc1	Ar0	Aqol0	C2	Cd6	Cr0	Cqol2
	Gn0	x0	Py1	PCT2	Prel0							

there have been three previous vaginal repair operations. The effect of the prolapse on the patient's quality of life is moderate, but the patient has severe urinary retention requiring self catheterisation and severely affecting her quality of life. There is no posterior colpocoele, no haemorrhoids, no mucosal prolapse and no previous surgery for anorectal prolapse. There is however a small rectocoele extending into the perineum associated with a degree of constipation which has been present for 5 years and is also affecting quality of life. There has been no previous surgery for constipation. External genitalia are normal. She has not had a hysterectomy but has undergone unsuccessful pelvic rehabilitation treatment. She has weak pelvic muscle contraction. There is good relaxation of the pelvic floor.

SECTION 3: GENERAL HEALTH FACTORS

G records the general health of the patient where 0 = no health problems, 1 = minimal health problems, 2 = significant health problems, 3 = severe health problems.

Level 3 medical conditions are defined as those diagnoses that pose an immediate and significant threat to the patient. Level 3 problems include stroke, heart attack, pulmonary embolus, other cardiac disease or previous thromboembolic disease. They require a comprehensive pre-operative medical and anaesthetic workup.

Level 2 diagnoses are medical problems that are unlikely to increase morbidity and mortality if anticipated prior to surgery. Any potential risk is reduced by precautionary medical treatment. Level 2 problems might include diabetes, treated cancer, peripheral vascular disease or inflammatory bowel disease. Level 2 medical conditions require a preoperative anaesthetic consultation.

Level 1 diagnoses represent a small or insignificant risk and do not require any special intervention.

Men (mental function) is measured on a scale of 0–3 where 0 = normal, 1 = slight impairment, 2 = moderate impairment and 3 = severe impairment. Mob (Mobility) is graded using a similar scale.

S relates to sexual function. N = not active or interested, 0 = normal function, 1 = minor irritation or problems, 2 = moderate sexual dysfunction, 3 = severe sexual dysfunction.

Sexual function is included in the general domain so as to emphasise the variety of factors which can affect sexuality beyond physical problems in the pelvic floor.

TABLE 8. – *General Health.*

G	G = 0–3	Men = 0–3	Mob = 0–3	S = N/0–3

Example: The patient presented below has minimal general health problems, mild mental problems such as depression, and good mobility. She is not sexually active.

TABLE 9. – *Example of general health assessment.*

G	G1	Men1	Mob0	S N

SECTION 4: HANDICAP INCLUDING PAIN

The handicap (H) defines the severity of the patient's specific disability due to the symptoms of pelvic floor disease and is represented by the maximum quality of life score recorded in any part of the short-IPGH record. Pain is assessed on a scale of 0-10 using a visual analogue scale. The doctor index (D) is the number of doctors (n) that the patient has consulted for pelvic floor problems.[9, 10, 11]

TABLE 10. – *Handicap and pain assessment.*

H	H = max qol	Pn	VAS = 0–10	D = n

Example: The patient below has seen two doctors for her current problems and has severe pelvic pain. The maximum QOL recorded elsewhere in her assessment is 2.

TABLE 11. – *Example of handicap and pain assessment.*

H	H2	Pn8	D2

CASE REPORT

In order to further understand the Short-IPGH system in clinical practice a case report is presented : 65y Para 2 Gravida 1.

I	Ui3	Uid2	ur3	Uiy1	Uir1	pd4	Uiqol3	Fi1	Fid1	Fiy0	Fir0	Fiqol1
P	Vd5	a3	p0	s1	e0	Vr0	Vqol2	L0	Ru2	Rud3	Rur0	Ruqol2
	Ad0	h0	m 0	r0	ed0	rc0	Ar0	Aqol0	C0	Cd0	Cr0	Cqol0
	Gn0	x1	Py0	PCT1	Prel0							
G	G2	Men0	Mob2	S2								
H	H3	Pn0	D2									

This 65-year-old woman has been pregnant twice but delivered only once. She reports severe urinary incontinence for 2 years with severe urgency in association with a Grade 3 cystocoele which has been present for 5 years. She uses 4 pads each day and has undergone unsuccessful pelvic floor rehabilitation as well as one previous incontinence procedure. The problem is causing a severe impact on her QOL. Mild faecal incontinence has been present for 1 year. She has had no previous surgery for this condition. It is only having a minimal effect on her QOL. Moderate urinary retention has been present for 3 years and is causing moderate impact on quality life. Examination reveals a Stage 3 cystocoele, no posterior defect, slight uterine prolapse but no enterocoele. She has undergone a previous hysterectomy but no previous prolapse surgery. There is a moderate effect on QOL due to the cystocoele.

In the posterior compartment there was no evidence of haemorrhoids, mucosal prolapse, rectocoele, or edrocoele. There have been no previous surgical procedures for anorectal prolapse and the quality of life associated with rectal prolapse is normal. There is no constipation. External genitalia examination is normal. The PC muscle function test shows mild weakness. Pelvic muscle relaxation is normal. This patient has some health issues of significance such as diabetes or hypertension. Her mental state is normal but her mobility is moderately impaired. She is still sexually active but with moderate problems. Handicap

assessment reveals her maximum QOL is 3. She has seen two doctors regarding her current pelvic floor problems and at present does not complain of any pain.

DISCUSSION

The short-IPGH allows a large amount of clinical information to be presented in a short format. The changes from the original IPGH system have been made to make it easier to record the data and easier to remember the various components of each assessment. Different specialists have different understandings of similar terminology, or different terminologies for the same conditions. Colorectal surgeons and gynaecologists are speaking about different things when they talk about a rectocoele. The short-IPGH is a first step along the path of developing a common language at the basic clinical level to enable the information about a patient to be recorded in a standardised way. It has to be emphasised, however, that this system is dependent on the quality of the information obtained. It does not pretend to be an objective instrument of measurement, as each component of the assessment is subjective unless obtained through validated tests. The short-IPGH may prove to be an important step in eventually developing a common data set and choosing a set of clinical tools that objectively record important information.

Our experience has shown that completion of this proforma at the conclusion of taking a history and examination provides an excellent summary of the patient in the medical record. This simple process highlights the salient points of the history and is available as a starting point for the next clinical visit. It avoids having to scan the entire history of a patient to try and remember the important issues and it is much more sensible to record the details of the patient's history into the short-IPGH proforma (Appendix 1) when the information is still fresh in the doctor's mind.

CONCLUSIONS

The short-IPGH presented here is a compromise. It is not intended to upset any clinician by appearing to reduce the importance of the detailed analysis of the particular area of history or examination that he or she likes to record. This system is put forward as a practical attempt to develop a common multidisciplinary terminology and enable clinicians to compare patient data and understand each other's assessment. Studies are now underway to validate the short-IPGH system in the context of a multidisciplinary pelvic floor clinic.

APPENDIX 1. – *Short IPGH proforma.*

Patient ID

Address

DOB Date of Examination

I	Ui FI	Uid Fid	ur	Uiy Fir	Uir Fiqol	pd	Uiqol					
P	Vd Ad	a h Gn	p m	s r x	e ed Py	Vr rc PCT	Vqol Ar Prel	L Aqol	Ru C	Rud Cd	Rur Cr	Ruqol Cqol
G	G	Men	Mob	S								
H	H	Pn	D									

APPENDIX 2. – *Grading of constipation.*[6, 7]

number of defecations per week	0–4
obstruction/straining/anal pain	0–4
incomplete defecation	0–4
abdominal discomfort/pain/bloating	0–4
time (min) spent in toilet	0–4
help for defecation: laxatives, suppositories	0–1
help for defecation: enemas, digitations	0–2
unfruitful attempts	0–4
how many years	0–4

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Correspondence to:
Dr. BRUCE FARNSWORTH
Centre for Pelvic Reconstruction
Suite 505, San Clinic, Sydney Adventist Hospital
185 Fox Valley Rd
Wahroonga 2076 Australia
Tel: +61 2 9473 8555 Fax: +61 2 9473 8559
E-mail: drbruce505@yahoo.com.au