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Titre :

Incontinence urinaire féminine : Étude des pratiques chirurgicales en France.

Urinary incontinence in women: A study of surgical practices in France

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RÉSUMÉ :

But :

Préciser le nombre et le type des interventions chirurgicales pour incontinence urinaire chez les femmes en France.

Matériel:

À partir des données du Programme de Médicalisation des Systèmes d'Information (PMSI) de 2009, nous avons analysé pour trois Groupes-Homogènes-de-Malades (GHM), regroupant la majorité des actes de chirurgie de l'incontinence urinaire d'effort (Cervicocystopexie, Réparation de l'appareil génital féminin, et Hystérectomie), la distribution des interventions chirurgicales qui y étaient répertoriées.

Résultats :

42223 procédures chirurgicales pour incontinence urinaire d'effort ont été réalisées en France en 2009, 92% (n=38929) sont des bandelettes sous-urétrales. L'acte est dans 58% (n=24387) des cas isolé et pour le reste associé à un geste sur la statique pelvienne dans 25% des cas (n=10741) ou à une hystérectomie dans 16% des cas (n=6671). Lorsque la chirurgie de l'incontinence urinaire d'effort est le seul acte réalisé, l'âge moyen des opérées est de 56,5 ans et la durée moyenne de séjour de 1,9 jour. Cinquante sept pour cent (n=24037) des actes sont effectuées en secteur privé.

Conclusion :

En 2009, dix ans après son introduction en France, la bandelette sous-urétrale représentait l'immense majorité des interventions pour incontinence urinaire. Si on estime à 4 millions le nombre de femmes incontinentes en France en 2009, l'incidence annuelle de cette chirurgie se situait autour de 1%.

Mots-Clés : épidémiologie, incontinence urinaire, femme, chirurgie, France

Nombre de Mots : résumé 263, texte 2711.

ABSTRACT:

Objective:

To assess the number and the types of surgical procedures for urinary incontinence among women in France. We are assuming that techniques by suburethral sling (SUS) have replaced Burch colposuspension.

Material:

Using French hospital discharge data from the 2009 Medical Information System Program (PMSI), we analyzed with regard to three homogeneous Diagnosis-Related Groups of patients (DRG), comprising the majority of stress urinary incontinence surgical procedures (Cervicocystopexy, Prolapse repair, and Hysterectomy), the detailed distribution of the different operations indexed in that information system.

Results:

More than 42000 cervicocystopexies (42223) were carried out in France in 2009, and a SUS was used in 92% of the procedures (n=38929). In 58% of the cases (n=24387) this surgery was the only one, and in the others it was associated with prolapse repair in 25% of the cases (n=10741) or with a hysterectomy in 16% (n=6671). When a cervicocystopexy was the only operation performed, the average age of the women was 56.5 years and the average stay in hospital was 1.9 days.

Fifty-seven percent of the cervicocystopexies using SUS (n=24037) were carried out in private sector. Mean durations of stay were significantly shorter in the private sector than in the public sector for the diagnosis-related groups undergoing cervicocystopexy or prolapse repair.

Conclusion:

In 2009, ten years after its introduction in France, the suburethral sling is used in the overwhelming majority of cervicocystopexies in France. Among an estimated 4,000,000 incontinent women in France in 2009, this surgery was undergone by approximately 1% of them each year.

Key words: epidemiology, urinary incontinence, woman, surgery, France

INTRODUCTION:

Stress urinary incontinence (SUI) in women is a public health problem on account of its prevalence, its consequences on quality of life and its costs. SUI affects an estimated three to six million women in France [1-3]. Reduction of the frequency and consequences of female urinary incontinence is figures among the one hundred public health objectives defined in 2004 by the French parliament.

Among the widely used surgical treatments, abdominal retropubic colposuspension (the Burch procedure) [4], was the technique of reference through the end of the 1990s. The suburethral slings or tapes (SUS) that appeared at the end of the 1990s for retropubic procedures [5] and at the outset of the 2000s for transobturator procedures [6] have facilitated surgical treatment that is less invasive than and just as efficient as Burch colposuspension [7]. The simple use and low morbidity associated with curative SUS techniques have helped to boost their circulation. Scholarly organizations such as the French National College of Gynecologists and Obstetricians and the French Urology Association, of which the recommendations were recently assessed [8] recommend SUS as first-line treatment because the postoperative period is particularly short and easy to manage [9,10]. A recent study has shown that these recommendations have been widely distributed to health care professionals [11]. What is more, there are few data on surgical practices in France with regard to SUI, except in the Paris areas, where as early as the outset of the 2000s, close to the 85% of SUI-related procedures were carried out with a SUS [12]. At the same time, there seems to exist a trend favoring the transobturator route [13].

In order to precisely indicate the apportionment in France of surgical interventions for female urinary incontinence, it is necessary to possess an exhaustive data base bringing together the data from private as well as public and « mixed » public health establishments. Since no specific register exists, we deemed it pertinent to interrogate the 2009 Medical Information System Program (PMSI), which is readily accessible on the site of the French Technical Hospital Information Agency (ATIH, www.atih.sante.fr).

MATERIALS AND METHODS

Subsequent to enactment of the 31 July 1991 French hospital reform Law, a medical information system program known as PMSI was put into place, and it is aimed at describing hospital activity through the coding of diagnoses and medical acts or procedures. Hospital stays are considered according to their classification in terms of Diagnosis-Related Groups (DRGs, known in French as GHM). Attendant complications or associated morbidities, length of stay and age are the elements defining the four DRG levels, which are numbered from 1 to 4.

The statistics available on the ATIH site have been compiled in terms of main diagnosis, medical act specific to the procedure being studied ("classifying procedure") and DRG. Construction of a DRG is based on an algorithm to which several inputs contribute. A DRG is composed of an aggregate of hospital stays with a number of diagnoses and classifying procedures in common. As we study the construction of this algorithm, we may identify the diagnosis-related groups in which the classifying procedures we are striving to describe may be classified. Cross-referencing of the procedure data base and the group data base allowed us to define 3 DRGs of interest with regard to urinary incontinence surgery in cases grouped the heading of CMD13 (disorders of the female genital apparatus). To summarize, most of the time surgery for female urinary incontinence (cervicocystopexy) takes place when a patient is classified 13 in the diagnosis-related groups 13C17 (Cervicocystopexy), 13C03 (Hysterectomy), or 13C04 (Prolapse repair).

For each DRG of interest we have combined the distribution results by procedure for the four DRG levels and thereby spelled out the distribution of operations on the female urinary tract.

We verified the exhaustiveness of our data collection through cross-referencing of the data by diagnosis and by DRG. With this in mind, we conducted a search on the ATIH site for the number of hospital stays listed in the 2009 data base corresponding to diagnosis of stress urinary incontinence "N393"; at the same time and so as to have an idea of the distribution of this diagnosis in other DRGs, we counted the number of "N393" diagnoses in the 3 DRGs of interest. The results are expressed in terms of number of stays and percentage.

RESULTS

As regards the “Cervicocystopexy” DRG, average length of stay was 1.9 days, while average age of patient was 56.5 years (Table 1). As regards the surgical techniques employed, 97.7% of the cervicocystopexies were carried out by SUS. In this DRG, Burch colposuspension by laparotomy or laparoscopy represented less than 1% of the procedures. Sixty percent of cervicocystopexy hospitalizations took place in the private sector.

As regards the “Prolapse repair” DRG, average age of patient was 62.3 years and average length of stay was 4.5 days (Table 2). On account of associated procedures, the total number of medical acts included in Table 2 is higher than 100%. And in this DRG, the vaginal route was by far the most widely used, with 18274 classifying procedures reported (70%) versus 12103 for laparoscopy (45%) and only 1879 (7.1%) for laparotomy. In 32.7% of the surgical operations for genital prolapse, SUS procedure was associated. Whatever the route, use of Burch colposuspension remained lower than 1%. As regards this DRG, 62% of the activity took place in the private sector. Kelly infra-urethral plication was marginal, accounting for only 4.5% of the procedures carried out, and 82% of the time, it took place in the private sector.

As regards the “Hysterectomy” DRG, average age was 52.9 years and average length of stay was 5.3 days (Table 3). In this group, the vaginal route appeared to be privileged. As concerns the non-vaginal route, in terms of number of stays laparotomy remained higher than laparoscopy. Cervicocystopexy by SUS was associated with 9.2% of the reported hysterectomies, which meant that in this group, it was the procedure the most frequently employed in cases of SUI. Urinary incontinence treatment by non-vaginal route was rare, representing less than 2% of the cumulative cases. Close to 50% of the hysterectomies were carried out in the private sector, with statistical distribution in terms of approach routes similar to that observed in the public sector. A few marginally employed procedures, such as bladder neck support by infraurethral myoplasty via the vaginal route and Burch colposuspension, were carried out primarily in the private sector (respectively 74% and 77% of the reported procedures).

A few of the treatment procedures for urinary incontinence pertained to other diagnosis-related groups having little to do with urinary incontinence, but fewer than 10 women were involved. The one exception was DRG 11C041 « Other bladder

interventions with the exception of transurethral interventions», which involved some 1315 cervicocystopexies by SUS. Unlike the three other DRGs under consideration, the grouping function for this DRG 11C041 did not discriminate by gender, and it was consequently difficult to know whether the persons having undergone treatment were women or men.

Comprehensive analysis shows that the number of hospital stays subsequent to a diagnosis of stress urinary incontinence “N393” inventoried in the 2009 ATIH data base was 28021. At the same time, the number of “N393” diagnoses in our three DRGs of interest was 27087. Subtraction shows that 934 “N393” SUI diagnoses, approximately 3% of the overall total, were assigned to other DRGs, and thus did not correspond to our description.

Table 4 provides an overall picture of the number of SUI surgical procedures listed by the PMSI in the 2009 ATIH data base. The actions mentioned correspond to the most frequent cervicocystopexy procedures in the framework of our 3 DRGs of interest, and are found in the A-293 list compiled by the PMSI. These procedures are considered as classifying procedures in accordance with the CMD 13 algorithm (disorders of the female genital apparatus). This table also includes SUI surgical procedures associated with a hysterectomy and not included in list A-293. It enumerates 42223 procedures in France of which 38929 (92%) were carried out by SUS, all establishments included. Sixty-two per cent (62%) of the operations involving SUS were performed in the private sector. As for Burch colposuspension by laparotomy (JDDA002), it represented only 564 procedures, of which 68% took place in the private sector. As for the Bologna technique, which consists in support of the bladder neck by vaginal wall sling [14], it was only marginally used, and of the 199 procedures listed, 48% took place in the private sector. The overall classification of cervicocystopexies according to DRGs was 24464 (58%) for the DRG “Cervicocystopexy”, 11483 (26%) for the DRG “Prolapse repair”) and 6671 (16%) for the DRG “Hysterectomy”.

DISCUSSION

All told, in 2009 more than 42000 surgical procedures consisting in cervicocystopexy for SUI took place in France, and 92% of them were carried out by SUS. In over half of the cases (58%) they were isolated (“cervicocystopexy” DRG), while in the other cases, the procedures were associated with prolapse repair (26%) or a hysterectomy (16%). As regards the “cervicocystopexy” DRG, the mean age of the women having been operated was 56.5 years, and the mean duration of their stay was 1.9 days.

Even though more extreme values were reported, most studies have drawn the conclusion that among female adults in the general population, the prevalence of urinary incontinence ranges from 25% to 45% [2], which means that in 2009, there were around 4 million incontinent women in France. The annual incidence rate of surgery for SUI, a rate translating the per-year percentage of incontinent women in France undergoing an operation, whatever the method employed, was according to our estimate, about 1%. Even though the literature on this subject is inadequate, the recent study by Wu [15] shows that in the United States in 2010, a comparable estimate came to 1.6% (13 million incontinent women and 217,000 interventions).

The figures published in this work translate the incidence in France of surgical treatment for female urinary incontinence in 2009. Since a dedicated register does not yet exist, the PMSI is one of the only data bases in France allowing for a relatively precise estimate to be carried out. A PMSI-based approach is open to criticism from a methodological standpoint since it was not initially intended to be used as it is nowadays, and yet for 20 years it has effectively helped researchers to apply a measuring stick to the occurrence of a number of diseases [16]. While any diagnosis-based approach is controversial on account of its high degree of code dependency, the classifying procedure approach may be relatively comprehensive to the extent that all of the concerned medical establishments require coding in order to ensure their overall annual financing; what is more, numerous controls by social security inspectors serve to verify the exactness of the data received.

That said, the data base will always be dependent on the coding, and one on the limits of our study consists in the fact that in the 2009 PMSI data collection, we were unable to distinguish transobturator from retropubic tape. It would have been interesting to compare the two procedures in terms of how many times they were carried out, and it is worth noting that as of 2012, given the introduction in June 2011

of the code JDDB005 for the transobturator route and the introduction in January 2012 of the code JDDB007 for the retropubic procedure, it is henceforth possible to make the necessary distinction.

Another source of code error resides in the withdrawal or removal of the vaginal prostheses. While there do exist specific and detailed codes pertaining to the removal or ablation of the SUS (from JRGA001 to JRGA004, JRGC001, and JRPA001), there exists no code denoting removal of a subvesical meshes that could be analogically coded by using the code employed for SUS removal. In the present study, we lacked the means to control this classification bias.

In order to verify the internal validity of our study we have tried to evaluate the frequency of code errors in our comprehensive analysis and come to an estimate of 3%, a rate remaining acceptable for this type of study, in which it must imperatively remain lower than 10%.

Several external criteria of validity have confirmed the interest of our methodology. For example, the mean age of the women operated for urinary incontinence was 56.5 years, and this figure is comparable to the mean ages found in other large-scale epidemiological studies based on other sources, particularly direct questioning of large segments of the population [17]. The mean ages of the female patients significantly differed (supplementary analysis not presented here) between the three DRGs of interest: 62.7 years for procedures aimed at repairing the female genital apparatus, 56.5 years for cervicocystopexies and 52.9 years for hysterectomies. These mean ages are in agreement with results in the literature showing that the peak frequency for urinary incontinence is found at ages ranging from 45 to 64 years [18].

Our work also serves to confirm the near-disappearance of approaches such as the Burch or Bologna procedures, which have been replaced by cures for urinary incontinence involving a suburethral tape or sling. Our data are in agreement with trends recently noted in other countries such as the United States. In a study methodologically comparable to ours, Oliphant et al. have observed a 46% diminution between 1979 and 2004 in recourse to Burch-type procedures [17]. On a parallel track, Oliphant reported a 93% increase in the implementation of SUS-type procedures. The trend was confirmed in 2002 in an essay by Ward, who showed that while the respective techniques do not differ in terms of effectiveness, a SUS

operation is much simpler to carry out than the Burch procedure [7]. That said, enthusiasm for SUS may be tempered by results such as those of Fialkow et al, who observed in a large retrospective cohort a higher rate of re-operation for urinary incontinence in patients with a sling than in patients having undergone the Burch procedure [19]. However, a recent meta-analysis reviewing more than 40 randomized controlled trials and comparing SUS to the Burch technique concluded that the rate of objective and subjective cure was higher in the SUS patients [20]. Several long-term follow-up cohort studies have facilitated assessment of the effectiveness and durability of SUS, and ten years after surgery, 94% of the one-time patients have declared themselves satisfied with the result [21]. On the other hand, risk of bladder perforation is 5 times higher with SUS than with Burch [20].

As some authors recommend, SUS can be introduced on an out-patient basis [22]. Unfortunately, our study did not enable us to answer questions pertaining to the possibility of ambulatory care and treatment for urinary incontinence. Boyle has confirmed the existence of a trend in favor of ambulatory care by showing that in the United States, instances of this type of treatment doubled between 1994 and 1996 [23]

Sixty per cent (60%) of the SUS procedures are carried out in the private sector. This is slightly higher than the percentage of surgical interventions (55%) carried out in France in 2008 [24].

As regards care for female pelvic organ prolapse, predominance of the vaginal route and a preference of laparoscopy to laparotomy have been observed. When a urinary procedure is called for, SUS has remained the most widely used. And as for hysterectomies, our study confirms the predominance of the vaginal route.

CONCLUSION

Recent literature has demonstrated the equivalent effectiveness, at least in the medium term, of SUS and Burch colposuspension. However, Burch colposuspension is still considered the reference technique when it comes to curing female stress urinary incontinence. Study of contemporary French surgery techniques shows that less than 1% of today's interventions are carried out according to the above indication. Ten years after its introduction in France, SUS represents by far the most widely used type of intervention.

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Table 1. Distribution of the main urinary incontinence procedures for the Cervicocystopexy DRG.

Cervicocystopexy DRG (13C171 to 13C174)					
	Common name	**CCAM code**	**Public+ESPIC+Private**		**% Private Activity**
DESCRIPTION:					
Participants				24387	60,0%
Mean age (years),			56,49		
Standard deviation Age			11,69		
Mean hospital stay (MHS) in days			1,88		
Standard deviation MHS			1,17		
Deaths				1	
URINARY INCONTINENCE PROCEDURE				24464	60,0%
Cervicocystopexy by sling with vaginal approach	***TVT/TOT***	JDDB001/JDDA003	97,7%	23821	60,5%
Indirect CCPX of pectineal ligament (Cooper's) by laparotomy	***Burch***	JDDA002	<1%	132	62,9%
Indirect CCPX of pectineal ligament (Cooper's) by laparoscopy	***Burch***	JDDC002	<1%	39	30,8%
Direct CCPX with infra-urethral sling by laparotomy, or through transvaginal route	***Göbell Stöckel***	JDDA006	1,1%	274	43,1%
Direct CCPX with infra-urethral prosthetic sling by laparotomy	***Sling***	JDDA005	<1%	78	29,5%
Direct CCPX with fascial infra-urethral sling by laparotomy	***Sling***	JDDA004	<1%	27	7,4%
Indirect CCPX with pedunculated vaginal sling by laparotomy and vaginal approach	***Bologna***	JDDA007	<1%	48	54,2%
Indirect CCPX with vaginal approach and by abdominal route, with endoscopic guidance	***Raz***	JDDA008	<1%	45	24,4%

Legend: CCPX, Cervicocystopexy; ESPIC-Etablissement de Santé Privé d'Intérêt Collectif (private health establishment of public interest); CCAM, Classification Commune des Actes Médicaux (common classification of medical procedures); TVT/TOT, Tension free Vaginal Tape/Trans-Obturator-Tape.

Table 2. Distribution of the classifying procedures for the Prolapse repair DRG.

Prolapse repair DRG (13C041 to 13C044)

	Common name	CCAM code	Public+ESPIC+Private,	
DESCRIPTION:				
Participants				26381
Mean age (years)			62,7	
Standard deviation Age			10,2	
Mean hospital stay (MHS) in days			4,5	
Standard deviation MHS,			2,3	
Deaths			7,0	
CLASSIFYING PROCEDURES				
BY LAPAROTOMY				1879
BY LAPAROSCOPY				12103
BY VAGINAL ROUTE				18274
URINARY INCONTINENCE PROCEDURE:				10741
Cervicocystopexy by sling with vaginal approach;	***TVT/TOT***	JDDB001/JDDA003	32,7%	8617
Infraurethral plication with vaginal approach;		JMBA001	4,5%	1182
Bladder support by infra-urethral myoplasty with vaginal approach		JMDA001	1,3%	331
Indirect CCPX of pectineal ligament (Cooper's) by laparoscopy	***Burch***	JDDC002	<1%	205
Direct CCPX with infra-urethral sling by laparotomy or through tranvaginal route	***Göbell-Stöckel***	JDDA006	<1%	76
Indirect CCPX of pectineal ligament (Cooper's) by laparotomy	***Burch***	JDDA002	<1%	66
Direct CCPX with prosthetic infra-urethral sling, by laparotomy	***Sling***	JDDA005	<1%	57
Indirect CCPX with vaginal approach and by abdominal route, with endoscopic guidance	***Raz***	JDDA008	<1%	42
Indirect CCPX with pedunculated vaginal sling, by laparotomy and with vaginal approach	***Bologna***	JDDA007	<1%	25
Direct CCPX with infra-urethral fascial sling, by laparotomy	***Sling***	JDDA004	<1%	6

Legend: CCPX, Cervicocystopexy; ESPIC, Etablissement de Santé Privé d'Intérêt Collectif (private health establishment of public interest); CCAM, Classification Commune des Actes Médicaux (common classification of medical procedures); TVT/TOT, Tension free Vaginal Tape/Trans-Obturator-Tape.

Table 3. Distribution of the classifying procedures for the Hysterectomy DRG.

DRG corresponding to the different hysterectomies (13C031 to 13C034)	CCAM code	Public+ESPIC+Private		% Private Activity
DESCRIPTION:				
Participants			48386	50,3%
Mean age (years)		52,91		
Standard deviation Age		11,41		
Mean hospital stay (MHS) in days		5,35		
Standard deviation MHS,		2,74		
Deaths		18,00		
DISTRIBUTION OF THE SURGICAL PROCEDURES: Percentage of the total number of hysterectomies,				
CLASSIFYING PROCEDURES				
BY LAPAROTOMY			29921	50,4%
BY LAPAROSCOPY			13041	52,8%
BY VAGINAL ROUTE			3109	31,4%
MIXED ROUTE: /VAGINAL			5367	43,5%
URINARY INCONTINENCE PROCEDURE:			6671	60,4%
Cervicocystopexy by sling with vaginal approach / TVT / TOT	JDDB001/JDDA003	9,2%	4443	56,6%
Bladder support by intraurethral myoplasty and vaginal route	JMDA001	<1%	410	73,7%
Subtotal hysterectomy with unilateral or bilateral adnexectomy, with posterior suspension of the uterine cervix and indirect cervicocystopexy of the pectineal ligament by laparotomy	JKFA029	<1%	230	56,5%
Indirect cervicocystopexy pectineal ligament (Cooper's) by laparotomy	JDDA002	<1%	187	77,5%
Subtotal hysterectomy, posterior suspension of the uterine cervix (colposuspension) and indirect cervicocystopexy with the pectineal ligament by laparotomy	JKFA012	<1%	162	71,0%
Indirect cervicocystopexy with pedunclated vaginal sling by laparotomy and vaginal route;	JDDA007	<1%	105	45,7%
Indirect cervicocystopexy of the pectineal ligament (Cooper's) by laparoscopy	JDDC002	<1%	67	37,3%
Indirect cervicocystopexy with vaginal approach and by abdominal route, with endoscopic guidance	JDDA008	<1%	62	17,7%
Direct CCPX with infra-urethral sling by laparotomy, or through transvaginal route	JDDA006	<1%	54	18,5%
Direct CCPX with infra-urethral prosthetic sling by laparotomy	JDDA005	<1%	25	52,0%
Direct CCPX with infra-urethral fascial sling, by laparotomy	JDDA004	<1%	10	10,0%

Legend: CCPX, Cervicocystopexy; ESPIC, Etablissement de Santé Privé d'Intérêt Collectif (private health establishment of public interest); CCAM, Classification Commune des Actes Médicaux (common classification of medical procedures); TVT/TOT, Tension free Vaginal Tape/Trans-Obturator-Tape.

Table 4: Number of cervicocystopexy procedures listed in 2009 according to the ATIH:

Classification of cervicocystopexy procedures (2009 PMSI data base)

	Common name	CCAM code	Public+ESPIC+Private		% Private Activity	
			N=42223			
Cervicocystopexy with infra-urethral sling by vaginal route		JDDB001	32929	38929	62,1%	61,7%
Cervicocystopexy by sling with vaginal approach + transcutaneous;	*TVT/TOT*	JDDA003	6000		60,0%	
Indirect cervicocystopexy of pectineal ligaments (Cooper's) by laparotomy	*Burch*	JDDA002	564		68,4%	
Direct cervicocystopexy with infra-urethral sling, by laparotomy and transvaginal route	*Göbell-Stöckel*	JDDA006	433		42,0%	
Indirect cervicocystopexy of pectineal ligaments (Cooper's) by laparoscopy	*Burch*	JDDC002	330		60,6%	
Indirect cervicocystopexy with pedunculated vaginal sling, by laparotomy and with vaginal approach	*Bologna*	JDDA007	199		48,2%	
Direct cervicocystopexy with prosthetic infra-urethral sling, by laparotomy	*Sling*	JDDA005	196		35,7%	
Indirect cervicocystopexy with vaginal approach and by abdominal route, with endoscopic guidance	*Raz*	JDDA008	184		39,7%	
Direct cervicocystopexy with fascial infra-urethral sling, by laparotomy	*Sling*	JDDA004	54		13,0%	
Subtotal HT, posterior suspension of uterine cervix (colposuspsension) and indirect cervicocystopexy of pectineal ligament, by laparotomy		JKFA012	164		70,7%	
Subtotal HT with unilateral or bilateral adnexectomy and with posterior suspension of uterine cervix and indirect cervicocystopexy of pectineal ligament, by laparotomy		JKFA029	235		56,6%	
Suspension of vaginal dome (Promontofixation) with indirect cervicocystopexy of the pectineal ligament (Cooper's)		JLDA004	257		81,3%	
Suspension of vaginal dome (Promontofixation) with direct cervicocystopexy by infra-urethral sling		JLDA003	247		64,4%	
Posterior hysteropexy (Promontofixation) with indirect cervicocystopexy of the pectineal ligament (Cooper's)		JKDA002	243		83,5%	
Posterior hysteropexy (Promontofixation) with direct cervicocystopexy of the pectineal ligament (Cooper's)		JKDA001	188		80,3%	

Legend: PMSI, Programme de Médicalisation des Systèmes d'Information (medical information system program); ESPIC, Etablissement de Santé Privé d'Intérêt Collectif (private health establishment of public interest); CCAM, Classification Commune des Actes Médicaux (common classification of medical procedures); TVT/TOT, Tension free Vaginal Tape/Trans-Obturator-Tape.