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Research Article

A Preliminary National Survey on Urodynamics Teaching during Urology Residency in France

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Abstract

Objectives: Urology training worldwide is dynamic. In France, the training curriculum is constantly evaluated and reforms are entering a new phase in France since the 2017 revisions. Previously, there was no uniform practical training in urology throughout the country. However, the modern demands of healthcare require competence, and standardization of the curriculum. This study's main objective was to assess the quality of urodynamics training provided to interns and clinic assistants in urology departments in France in 2020.

Methods: We performed an analytical, cross-sectional, prospective study from March to August 2020, that included all but 2 of the existing medical schools and university hospitals in France. Data were collected through exhaustive sampling using a questionnaire that was administered to each respondent.

Results: This study included 44 respondents from 18 university hospitals. Out of the respondents, 56.8% were urology residents. Regarding the place of urodynamic training in urological education, 50% of respondents felt it was important and satisfactory. Furthermore, 63.6% of respondents strongly indicated that they would consider receiving urodynamic education through DIUs, DUs, and ECUs, and 65.9% believed that it was possible for urodynamic training to be added to the program. When the performance and interpretation of urodynamic procedures (uroflowmetry, cystomanometry, and urethral profilometry) were compared, the average rate per resident was above 10. The differences in experience could be due to lack of a standardized and up-to-date urodynamic training curriculum, as 68.18% of respondents were enrolled in urology courses prior to the 2017 reforms.

Conclusion: Despite the low participation in this preliminary survey, we deduced that the majority of French residents have received teaching in urodynamics, which most consider as insufficient. They learned the theoretical notions largely through self-study or oral transmission of knowledge. They prefer to have a theoretical active education preferentially through courses at the faculty or by senior urologists.

Keywords: Urology Training; Urodynamics; Questionnaire; Residency Programs; Analytical Study

Abbreviations

DIU: Interuniversity Degree; DU: University Degree; ECU: Enseignement du Collège d'Urologie = Teaching of the College of Urology; USA: United States; DES: Diploma of Specialized Study; DESC: Diplôme D'études Spécialisées Complementaires; CCAs: Clinical Assistants; CHU: Centres Hospitaliers Universitaires; ECN: Epreuves

Classantes Nationales = National Classifying Events; AFU: Association Francaise d'Urologie = French Urology Association; AFUF: L'Association Française des Urologues en Formation = The French Association of Urologists in Training

Introduction

In recent years, there have been radical changes to urology training [1]. These changes have been fostered by technological advances, hyper-specialization, and the evolutionary trend of the modern world [2]. However, residents' perceptions of their urology training vary widely. A 2019 study in the United States (USA) found that urology interns expressed a lack of confidence in the implementation of procedures commonly encountered in urological practice [3]. In USA, residency programs are constantly evaluated. In 2013, to better prepare physicians for modern practice, as required by the realities of our century, the Accreditation Council for Graduate Medical Education proposed the 'Next Accreditation System' [4]. To receive this course certification, the accreditation board requires that each resident performs at least 10 urodynamic procedures without details on the procedures needed [5,6]. Although the USA is the leading scientific power, the French healthcare system is universally recognized for its quality and high standard of performance [7]. To maintain this status, adequate training of medical specialists is essential for development and innovation in each specialty. Therefore, in 2017, France adopted a curriculum reform for the training of residents.

Additionally, there are differences between the training that American and French urologists receive. In France, before the 2017 reform, the urology program was made up of a Diploma of Specialized Study (DES) in general surgery that was 5 years in duration and divided as follows: 8 semesters in accredited services for 1 of the specialized or complementary study diplomas of a surgical specialty (at least 2 semesters in the approved services for a diploma of specialized studies in general surgery, including orthopedic surgery; and at least 1 semester in the approved services for the diploma of specialized studies in general surgery, including visceral surgery). The final semester in licensed services for this specialty or another. It takes 1 - 2 years to complete a Diplôme D'études Spécialisées Complementaires (DESC) in urology after obtaining a DES in general surgery. The changes made by the reform are as follows: 4 years at the school for board certification and 2 years of practical training in the urology course (Figure 11) [8]. Moreover, despite the quality of urology training in France, practical training of urologists varies according to the institutions and people encountered during the course. During their training, urology residents must practice certain urodynamic procedures, such as dynamometry, cystomanometry, and urethral profilometry to gain the necessary experience for their practice. Given the growing role of urodynamic studies in urology, we wanted to determine the effectiveness of and satisfaction with urodynamics education in France.

General Objective

To assess the quality of urodynamic training of residents and clinical assistants (CCAs) in urology departments in France in 2020.

Specific Goals

- To assess the level of satisfaction with urodynamics teaching among residents and clinical assistants CCAs in urology departments in France in 2020.
- To appreciate the quality of urology training as perceived by residents and clinical assistants CCAs in urology departments in France in 2020.
- To quantify the number of urodynamic procedures performed or interpreted by residents and clinical assistants CCAs in urology departments in France in 2020.

Materials and Methods

Study framework

We conducted a study of the established medical schools and university hospitals in France in 2020, with the exception of the University Hospitals of Martinique and Point Pitre (in total, 30 of the existing 32).

Study method

Study type and period

This was a cross-sectional, prospective, analytical study that ran from March 2020 to the end of August 2020.

Study population

The study participants were the urology residents and CCAs from the faculties of medicine and Centres Hospitaliers Universitaires (CHUs) in 2020. We included all trainees and CCAs enrolled in urology DESs and DESCs who freely consented to participation in this study.

Any other Respondents than those mentioned above were excluded from this study.

Sampling

This was a comprehensive study; all those who met our inclusion criteria participated.

Method

Respondents were given a questionnaire (Annex 1) on Google Forms (Google, Mountain View, CA, USA) that was written in French and was related to urodynamics teaching during the urology internship in France. An e-mail with a link to the pre-established questionnaire was sent to the interns and CCAs. We also distributed the questionnaire on social media networks, such as Facebook and Twitter. We received support from a local association based in Montpellier, 'JULES,' for the dissemination of the questionnaire to the trainees. Finally, emails were sent to the secretaries of the university hospital centers and heads of the urology departments urging for questionnaire dissemination to the target population. By entering the email at the beginning of the questionnaire we made sure that each respondent answer only once.

Data analysis

After collecting the Google Forms data, they were entered into a database using Excel (Microsoft, Redmond, WA, USA) and statistically analyzed.

Results

General respondent characteristics

Breakdown according to respondents' status'

We received 44 responses, the majority of which came from residents from all years of urology study. Figure 1 shows the distribution by respondent studying year.

Figure 1: Breakdown according to respondents' status.

Breakdown according to respondent's place of practice

The respondents came from 18 university hospitals among the 30 requested for this study.

List of CHUs with answers: CHU Angers/CHU Besançon/CHU Bordeaux/CHRU Brest/CHU Grenoble Alpes Hospices Civils de Lyon/CHU Montpellier/CHU Nîmes/Public - Hospitals of Paris/CHU Reims/CHU Rennes/CHU Rouen/CHU Toulouse/CHU Tours/CHU Lille/CH Perpignan.

Respondents' views on urology training

Respondents' views on the importance of the place of urological training in urodynamics teaching

Half (50%) of the respondents found urological training in urodynamics teaching relevant. It should be noted that 36.6% of CCAs showed no interest in the use of this training in urodynamics teaching. Figure 2 summarizes the views of the study population on the importance of urological train.

Figure 2: Breakdown of the population studied based on their views on the importance of urological training in urodynamics teaching.

Theoretical urodynamics training

Figure 3 shows that the majority (65.9%) of the participants took theoretical courses on urodynamics during their training.

Source of the theoretical courses in urodynamics used by the respondents during their internship

Our study noted that 59,1% of the theoretical knowledge of the subjects in the questionnaire came from 2 sources: self-learning (books, videos, and websites) and oral transmission of knowledge by senior clinicians. Figure 4 shows the diversity of the theoretical

Figure 3: Breakdown of the respondents by the administration of theoretical urodynamics courses during their training.

urodynamic knowledge sources used by respondents during the internship.

Figure 4: Diversity of the theoretical knowledge sources for urodynamics used by respondents during residency program.

The usefulness of the theoretical urodynamics teaching during the internship

Figure 5 shows that respondents deem theoretical urodynamics teaching indispensable and very useful (52.3% and 45.5%, respectively) during the residency program.

The method of learning the urodynamics teaching

According to the majority (86.4%) of respondents, the best ways to learn urodynamics is through courses taught at the faculty or hospital by teachers or clinicians. Additionally, 63.6% of respondents found that IUDs, DUs and ECUs were suitable for teaching urodynamics. This is presented in figure 6.

Figure 5: Distribution of the respondents according to the degree of usefulness of the theoretical urodynamics teaching during internship.

Figure 6: Diversity of the learning methods used for urodynamic teaching and the respondents' corresponding levels of appreciation.

The respondents' satisfaction levels with the urodynamics training received during the residency

The results showed that the satisfaction rate varies among respondents, with 13.6% and 36.4% being very satisfied and satisfied, respectively. Contrastingly, 4.5% were dissatisfied with the training.

Views on accessibility to urodynamics courses during training

Figure 7 shows that the accessibility to the urodynamic courses was approved of by half of respondents.

Figure 7: Distribution of the respondents according to their views on accessibility to urodynamic courses during training.

Respondents' interest in courses on the basics of urodynamics

The majority (86.4%) of the respondents were interested in courses on the basics of urodynamics.

Views on the temporal ability to include urodynamic training in the internship

The majority (65.9%) of the study population found that there is enough time to add urodynamic training into the internship, as shown in figure 8.

Figure 8: Distribution of the respondents based on their interest in urodynamics courses.

The degree of the respondents' satisfaction with their urodynamics training

Our survey showed that 11.5% and 36% of respondents felt that they had been very well and well trained, respectively. In contrast, 22.7% and 6.8% of respondents felt that they were not well trained and not well trained at all, respectively. Figure 9 shows how respondents were divided according to the satisfaction levels with the urodynamic training.

Figure 9: Distribution of the respondents according to their level of satisfaction with their urodynamics training.

The DU, IUD, or urodynamics training requirements for intern training

More than half (52.3%) of the respondents felt that a DU, IUD, or urodynamic training should not be mandatory for residents, as shown in figure 10.

Figure 10: Breakdown of the respondents based on their views on whether DUs or IUDs should be required to provide urodynamics training to residents.

The practice of urodynamics according to the respondents

Number of uroflowmetry tests prescribed or interpreted by the respondents

More than half (52.2%) of the respondents interpreted or prescribed more than 50 uroflowmetry tests.

Number of cystomanometric tests performed or interpreted by the respondents

The majority (79.5%) of the respondents interpreted or achieved less than 50 cystomanometric tests.

Number of urethral profilometry tests performed or interpreted by the respondents

The majority (79.5%) of respondents interpreted or achieved less than 30 urethral profilometry tests.

Discussion

Despite the low participation of the urology residents in this survey, we analyzed some of the broad study findings. Most residents received courses with urodynamics teaching, some of which were considered insufficient. Majority of these theoretical notions were learned through self-learning or oral knowledge transmission. Residents felt it appropriate that theoretical urology education should preferentially be included in the faculty or clinical frameworks. We noted the incongruity between their appreciation of the training quality and their satisfaction with it. Nevertheless, interns pay particular attention to basic urodynamics courses and find that they are largely accessible. Therefore, the residents believed that it was possible for urodynamics training to be added to their curriculum through appropriate temporal arrangement. Moreover, it should be noted that respondents were divided on whether urodynamics teaching at DUs or IUDS should be made obligatory during their training course. One intern's opinion seemed so relevant that we felt it should be shared here: 'DU teaching should be compulsory. On the other hand, it does not seem normal to me that compulsory education should include additional tuition fees or at least a minimum.' As for the urodynamics balance sheets, urology residents in France had good average achievement or interpretation rates. The difference in the respondents' experiences and impressions of the questionnaire could be explained by the absence of a standardized and up to date urodynamics curriculum in France.

We noted that 68.18% of respondents were enrolled in urology courses prior to the 2017 reform. The objective of this reform was twofold. On the one hand, it would improve the theoretical and practical training of interns by modernizing it, while offering earlier, complete, and personalized training. On the other hand, it was imperative that the health needs of the population be better met by arranging the structure of the board certification and putting the students at the center of their future practical exercise from the time of their choice of ECN [8]. As a result of the reform, a certain inter-regional organization of DES courses by experts is intensifying and the movement of courses online has increased (for example more than 39 functional urology-related readings as a part of the deepening phase of a curriculum are available on the site: https://sides.uness.fr/elearning/)

Limitations of the Study

We encountered several institutional and material limitations in this study. Despite the significant personal effort that was made to disseminate the questionnaire through the internet, the participation rate remained low. Furthermore, our associations, such as AFU and AFUF, categorically refused when asked to disseminate the information. This work could have covered all existing university hospitals in France in 2020; however, we had no contact with Martinique and Point Pitre university hospitals. We would have preferred to have had a broader view of each intern's particular specialty interests or certain variables related to each program. The following variables that can still be studied: the faculty size and number of interns per department. Some characteristics could have been studied such as each resident's sex, level of education, and clinical interest.

Conclusion

In conclusion, the specialty of urology worldwide is perpetually evolving requiring adjustments in the training of specialist doctors, especially in the USA and France. Particularly, this is due to the in-force adoption of the DES urology reform since the beginning of 2017. However, the lack of a standardized curriculum in France before the 2017 reform could highlight the great difference in residents' experience and impression of the training found during our survey, as most residents were not registered before that date. Nevertheless, theoretical urodynamics courses should be provided as an active education preferentially through courses at the faculty or by senior urologists as it is the preferable method for the residents as shown in the study. The 2017 reform provides hope for modernized practical training in urology and a dream of good adaptation of training to new requirements in this dynamic world.

Geolocation Information

France/USA/Europe/Arab world.

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Declaration of Interest

The interest of the authors is to ameliorate urodynamic education in France and in the world.

Annex

Link to the questionnaire: https://docs.google.com/forms/d/e/1FAIpQLSdoxC3jWttLREKg001Pba3i13fyUlIN521ewAryKVqgOw9dA/viewform?usp=sf_link.

Figure 11: Urology residents' curriculum that has been in effect since the 2017 reform.

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