

STATISTICAL STUDY OF THE TUBO-OVARIAN PATHOLOGY IN BIHOR COUNTY

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Abstract

In the presented casuistry the predominant pathology is that of the tubo-ovarian area exclusively, but an important percent of cases with more extensive effects are also presented as P.T.O. (tubo-ovarian pathology). The thing that is common to all of them is that they affect the tubes and the ovaries and especially the surgical solution as a successful therapeutical attitude. The incidence of the hospitalizations with this pathology has a percentage value statistically close to the hospitalizations made to other departments of general surgery. There are no significant annual differences between the numbers of surgical interventions for the studied pathology, not even if we compare them to the interventions for the rest of the abdominal pathology. For the studied period, the annual difference between the minimum and the maximum number / percent of the operated patients is statistically insignificant in relation to the total number of cases. The annual average of the patients is high in comparison with other statistics due probably to the methodological nature of the department to which we are referring, as well as to the poor facilities their subordinate departments dispose of. The number of operated cases is higher in February – March and in September - October, regarding the scheduled cases. So, we can notice a slight influence of the socio-economic habits over the hospitalizations, as they decrease during the holidays, vacations and agricultural campaigns in spring and autumn. There are no statistically significant differences between the duration of hospitalization for P.T.O., R.t.o. and other pathologies specific to a general surgery department. But a gradual decrease of the duration can be observed throughout the years. This is secondary to the qualitative indication of the medical therapeutical gesture. The age of the patients influences the pathology as at certain ages certain pathologies are observed as being predominant. There is no correlation between the occupation of the patients and the pathology specific to the tubo-ovarian region, the examined group reflecting the socio-professional composition of the population in general.

Key words: correlation, climate-yield, irrigation, de Martonne aridity index wheat, crop rotation

INTRODUCTION

The tubo-ovarian region in women is one of the elements which define health and the future of the next generations. Considering the importance of the region in question, the continuous efforts to study and understand in detail the possibilities to identify and treat the pathology of this region, is justified. This study started out of this very desire and it aims to point out especially the surgical possibilities to preserve the ovaries and tubes in order to maintain the hormonal and reproductive functions of this region.

This study allows this way an evaluation of some standardized attitudes through an extended statistical study of the results, which will lead to better understanding of the advantages or disadvantages of these methods. The expected result is to find the real practical and efficient solutions.

MATERIAL AND METHOD

The paper is based on the casuistry of a surgery department covering a period of 20 years, with both chronic and emergency pathologies. The study involves selected cases with examples from each pathology class and the practical methods of treatment that were applied, so that these attitudes can be subsequently discussed and compared as a result.

We performed the research on the casuistry of the County Clinical Hospital of Bihor, mostly the 1st Surgical Department, covering a period of 20 years (1987 - 2006), involving 2.195 cases, which is part of a bigger project in which the studies of the years 2007-2011 will be included.

The study involved two separate groups of patients hospitalized between 1987 – 2006, in the 1st Surgery Department of the County Clinical Hospital. One group was considered to be the total number of cases without concrete specifications that involve one or more parts of the female genital apparatus and a second group was considered to be made up of the cases that involved only the ovaries or the tubes.

This study demonstrates the level of clinical and paraclinical examination (depending on the level of the facilities the hospital disposes of to carry out the paraclinical investigations), the applied preoperative treatment (rebalancing the hydroelectrolytic and acidobazic, treatment with antibiotics) as well as the efficiency of the surgical treatment.

Within the investigated group more parameters were monitored, each being described in a separate chapter:

- epidemiological data, incidence
- versions of pathology
- hospitalization numbers
- clinical examination record.

The obtained data – in numbers and percentages – were included in tables and then processed mathematically in order to define more accurately their statistical nature, significant ($p < 0,01$ or less) or insignificant (NS).

Based on the tables, graphs were drawn up, representing the base of the discussions for each chapter.

In all the discussed matters we've tried to formulate pertinent conclusions, strictly related to concrete findings.

The research methods which were used were:

- the clinical method
- paraclinical (specific) examinations
- anatomopathological examination
- preoperative treatment
- surgical techniques
- postoperative evolution

RESULTS AND DISCUSSIONS

The problems related to the incidence of tubo-ovarian pathology are subject of a great number of papers which together with the numeric and proportional differences of the data, indicate a slight increase of the incidence of the disease in the last 20 – 30 years (Novak, Vîrtej). The explanation is not the increase of the incidence of the diseases but rather the increase of addressability of the patients, the increase of the cultural level as well as of course, the favorable evolution of the means of investigation. In the performed study the presented casuistry of a single surgical department, the 1st Surgical Department of the County Clinical Hospital of Oradea (Fig 1). This fact doesn't allow us to formulate indisputable conclusions regarding the frequency of the illness in relation to the population of Oradea city / Bihor county, where these cases are almost exclusively come from. During the studied period there were 729.757 hospitalizations of which 73.113 cases were in the 1st Surgery Department. Out of these cases 2.195 were cases of tubo-ovarian pathology, exclusively or in association with other illnesses. Actually just the pathology of the tubes and ovaries, and here I'm referring to: malignant ovarian tumors, benign ovarian and / or tube cysts, hydrosalpinx, pyosalpinx, ectopic pregnancy, as well as malignant tube tumors, that we studied were in a number 1.286 cases.

The annual differences are not relevant statistically. At the same time a correlation can be observed between the general rate of ill persons in relation to the total number of hospitalized patients with tubo-ovarian pathology associated with other diseases or within the context of other diseases (P.T.O.), as well as with selected cases which affects exclusively the tubo-ovarian area (R.t.o.), as it is shown in the figures.

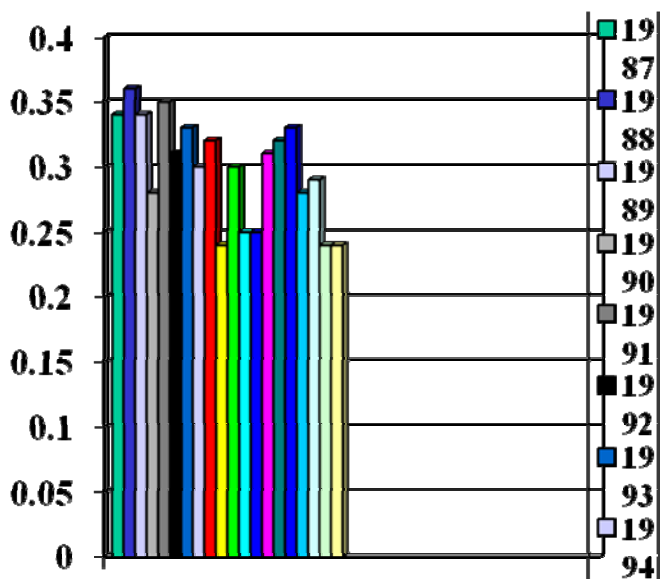


Fig. 1 Total number of hospitalizations per hospital.

$$\% = \frac{P.t.o.(nr.)}{Nr.total\ internari\ pe\ spital} \times 100$$

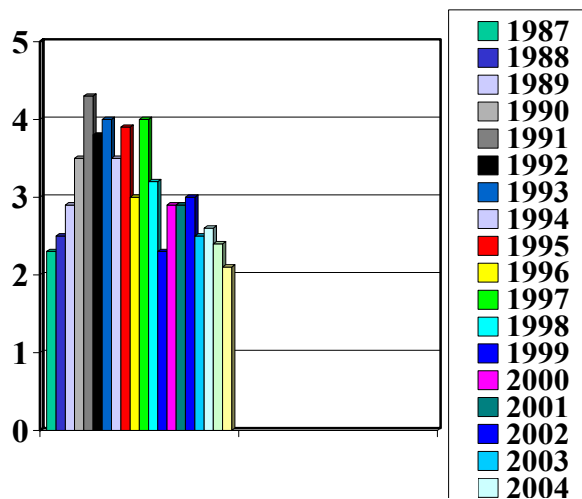
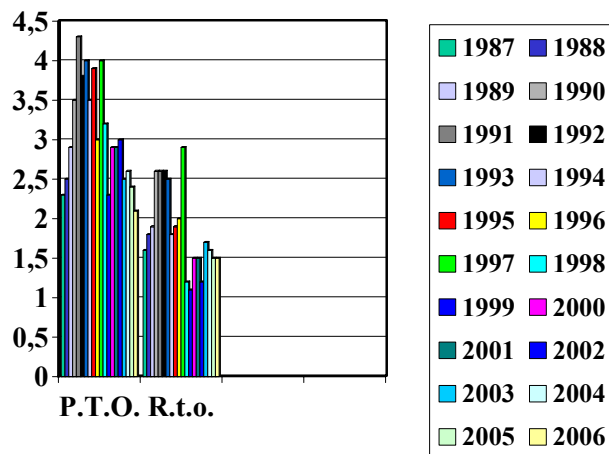


Fig. 2 Hospitalizations in the 2nd Department/year

$$\% = \frac{P.t.o.(m)}{Internari\ pe\ sectia\ Chirurgie\ II\ / an} \times 100$$



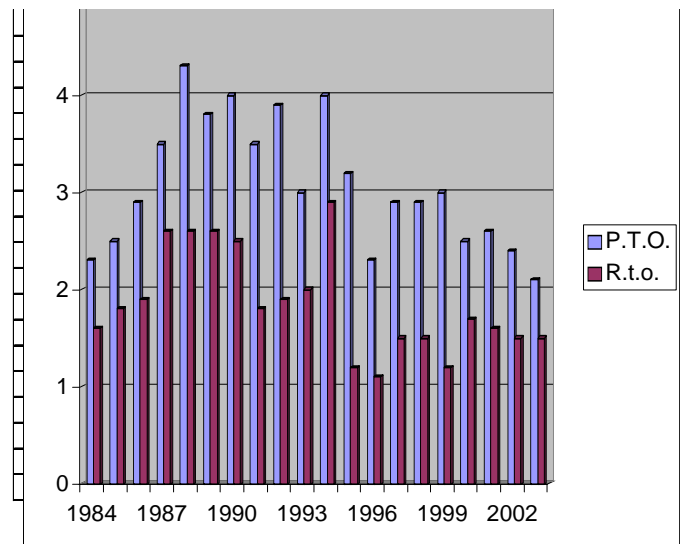
The graphical representation of the % obtained for P.T.O., and for R.t.o. was calculated as it follows:

$$\% = \frac{R.t.o.}{\text{int ernaliChirurgieII} / \text{an}} \times 100$$

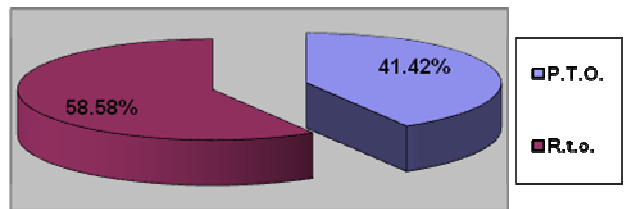
This noticed constant, with slight, insignificant percentage variations, is probably determined and influenced by several factors. This study includes the monitoring of these factors.

The studied cases are the ones that were hospitalized in the surgery department, without relevant differences between the emergency and the scheduled hospitalizations, as it is shown in the studied statistic. Being entirely surgical cases, 100% of them were resolved through some surgical technique adequate to each case. The fact that's worth emphasizing is the quasi-constant percentage value of the surgical interventions for P.T.O. in relation to the total number of annual surgical interventions.

Since there are no thorough researches available in this matter, the plausible explanation for these findings can only be hypothetical. The diagram no. 4 contains an explicit graphical representation, where the surgical interventions for P.T.O. in general are represented in percents, as well as the surgical interventions for exclusively R.t.o., noticing a quasi-constancy of the annual values.



If we compare the global specific pathology (which is practically the subject of the detailed study) with the global P.T.O., we can see that it represents more than half the cases as it is shown in diagram no. 5.

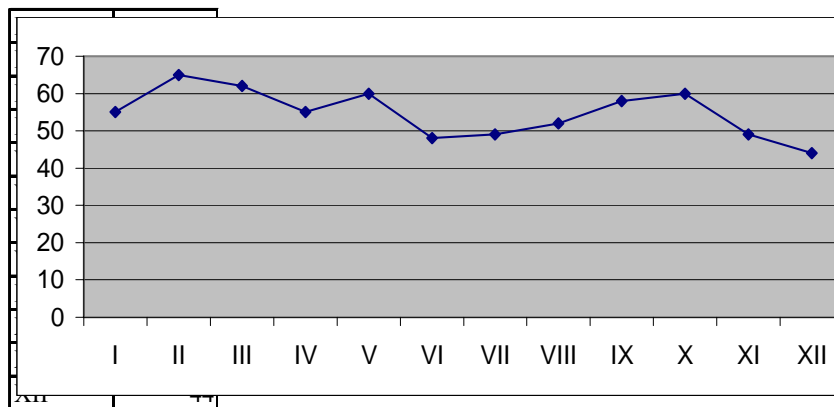


All these findings lead to the conclusion that this type of pathology concerns the surgery department and the constant of the addressability of the patients leads to the conclusion of a correct surgical approach of this type of diseases. This is shown by the study of the presented percentage values.

Slight fluctuations of the annual percentage can be noticed, especially in one, maximum two years following some administrative structural modifications, which would lead to incorrect conclusions, but we can notice the return to the usual values of striking constancy even. The average value of 20 years for R.t.o. is 18.5%, and the annual values from table 5 don't show so many deviations that they would be undoubtedly

considered relevant. The annual difference between the minimum and the maximum number / percentage of patients is not statistically relevant in relation to the total number of the studied cases.

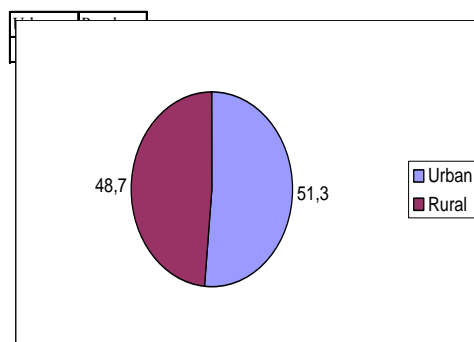
The distribution of the cases per months, as a unique statistical average of the studied years, even after extended calculations could not point out new, unknown data. Table 6 shows us the distribution of the hospitalizations per each month throughout a year, every monthly value being an average of the respective month of every studied year.



A slight decrease of the number of hospitalizations with P.T.O. or R.t.o. can be observed in April, May, June, July, August, November, December, but the same thing can be concluded considering the number of hospitalizations into a hospital or the surgery department, fact known as secondary to the socio-economic activities of the population. But the number of emergency hospitalizations remains constant which represents another argument to support the previous explanation. But still it seems that the polymorphic characteristics of the patients' lifestyle influences, even if only a little, the number of hospitalizations and implicitly of the surgical interventions.

The higher values have two peaks in February - March and in September - October.

Whether the patients originate from urban or rural areas doesn't represent an indicator that would allow us to draw any conclusions. The distribution of the cases doesn't indicate a significant statistical difference neither between the annual distributions of the cases originating from different environments (Table 5) nor between their sums (Diagram 7).



A slight influence can be observed as in the decrease of the scheduled cases in spring and autumn during the agricultural campaign but without reducing the average of the emergency cases.

The study of the patients' age in relation to the pathology didn't really add any new data. Other, even more complex studies have led to almost identical conclusions (Crăiuț). Thus, it's not surprising that during the sexually and hormonally active period of maturity the ovarian cysts, ectopic pregnancies and adnexal infections are more frequent. Same, after the degenerating phenomena start, uterine fibromas, benign and malignant tumors of the uterine body and cervix, ovarian neoplasm and at older age genital prolapses are more frequent. These observations were made following some much extensive studies too (Novak, page 63 – diagram 44), having the same results. The logical explanation lies within the physiological changes which take place in women's bodies and which create favorable conditions for the occurrence of these diseases.

CONCLUSIONS

- In the presented casuistry the predominant pathology is that of the tubo-ovarian area exclusively, but an important percent of cases with more extensive effects are also presented as P.T.O. (tubo-ovarian pathology). The thing that is common to all of them is that they affect the tubes and the ovaries and especially the surgical solution as a successful therapeutical attitude.

- The number of hospitalized patients has a minimal annual variation. The explanation of this characteristic of constancy would require researches that exceed the matter of this thesis. The only explanation for the monthly variation within a year is related to the socio-professional habits of the patients.

- The incidence of the hospitalizations with this pathology has a percentage value statistically close to the hospitalizations made to other

departments of general surgery, but it is significantly smaller than the percentage of the hospitalizations made to super specialized services of this profile (Crăiut).

- There are no significant annual differences between the numbers of surgical interventions for the studied pathology, not even if we compare them to the interventions for the rest of the abdominal pathology.

- The high costs to which the use of incorrect therapy or the occurrence of complications may lead, as well as the disasters which may be caused by incorrect surgical attitudes, represent additional arguments to support the search for some surgical treatment solutions as conservative as possible.

- For the studied period, the annual difference between the minimum and the maximum number / percent of the operated patients is statistically insignificant in relation to the total number of cases.

- The annual average of the patients is high in comparison with other statistics due probably to the methodological nature of the department to which we are referring, as well as to the poor facilities their subordinate departments dispose of.

- The number of operated cases is higher in February – March and in September - October, regarding the scheduled cases. So, we can notice a slight influence of the socio-economic habits over the hospitalizations, as they decrease during the holidays, vacations and agricultural campaigns in spring and autumn.

- There are NO statistically significant differences between the duration of hospitalization for P.T.O., R.t.o. and other pathologies specific to a general surgery department. But a gradual decrease of the duration can be observed throughout the years. This is secondary to the qualitative indication of the medical therapeutical gesture.

- Whether the patients live in urban or rural environment doesn't influence the rate of the occurrence of the illness and neither the number of hospitalizations.

- The age of the patients influences the pathology as at certain ages certain pathologies are observed as being predominant. This is the same conclusion that was drawn in other, more extensive studies (Crăiut).

- There is no correlation between the occupation of the patients and the pathology specific to the tubo-ovarian region, the examined group reflecting the socio-professional composition of the population in general.

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