

Telemedicine consultations in obstetrics and gynecology — a population based study in Polish-speaking women

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ABSTRACT

Objectives: Telemedicine is no longer in the realm of the future. It has already become an aspect of modern medicine. A number of countries across the world have successfully introduced telemedicine systems, which allows patients access to general healthcare and specialist consultations regardless of the distance separating patients from physicians. We aimed to evaluate the use of a telemedicine system by Polish-speaking women for the purpose of gynecological and obstetric consultations.

Material and methods: Our study used a telemedicine system operated by a healthcare entity offering healthcare services. We prospectively obtained data from Polish-speaking patients (residing all over the world) who underwent teleconsultations in gynecology or obstetrics in the period between Dec. 1, 2016, and Mar. 31, 2018.

Results: A total of 244 telemedicine consultations in 185 female patients were evaluated. These consultations were overwhelmingly for gynecological cases (76%). Obstetric consultations, which constituted only 24% of the total number of consultations, involved predominantly pathologies of pregnancy. The mean age of patients who used the telemedicine system was 27 years. Ten percent of the study subjects resided in a country other than Poland at the time of their consultation. Only one patient required an urgent referral for an in-person consultation at an emergency department.

Conclusions: Telemedicine consultations not only offer an easier access to the relatively difficult to obtain consultations with a specialist in the field of gynecology and obstetrics but may also be an alternative to conventional doctors' appointments, chiefly for those women who currently reside abroad or for those who seek an immediate gynecological consultation.

Key words: telegynecology; healthcare; telemedicine; eHealth

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INTRODUCTION

Telemedicine is currently one of the most rapidly developing areas of modern medicine. Implementation of telemedicine systems and eHealth programs has long advanced beyond the stage of clinical trials and research projects to become well established in healthcare services in many countries across the world [1]. The earliest records of the use of a telemedicine system in Poland come from the early 20th century. This was around the year 1935, when tele-electrocardiograms (tele-ECGs) started to be transmitted between two Clinics located approximately 500 meters apart in Lviv (currently on the territory of Ukraine) [2, 3]. At present, the little data there is on telemedicine in Poland is based on

only a few research studies, mainly on telecardiology and the use of telemedicine in family medicine and pathology [4].

Statistical data gathered by the Organization for Economic Co-operation and Development (OECD) indicates that there are only 2.3 doctors for every 1,000 citizens of Poland (which is the worst ratio in the European Union). This less than impressive figure calls for the introduction of telemedicine systems, which would speed up the process of obtaining a specialist consultation in Poland and facilitate patient access to qualified healthcare professionals [5].

Currently, the waiting period for a scheduled gynecological visit at a referral center, in Poland, ranges from 30 up to 90 days [6]. Accessing specialist medical

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care poses difficulties also for Polish-speaking patients who currently reside abroad. As of the end of 2016, there were over 2.5 million Poles temporarily living abroad, with 788 thousand of those living in the United Kingdom [7].

Telehealth improves access to health services by removing temporal and geographical barriers. It reduces the need for in-person consultations and travel, allowing patients to receive health services in locations that are the most convenient for them.

Objectives

In this paper, we reported an evaluation of telemedicine consultations in a Polish telemedicine clinic specialized in dealing with every kind of obstetrics and gynecology problems. The aim of our study was to analyze in detail the issues reported by patients during telemedicine consultations in obstetrics and gynecology, to note the age of the patients who used this telemedicine system, and to assess how many of the reported complaints resulted in an urgent referral to a hospital for an in-person consultation with a physician.

MATERIAL AND METHODS

Study teleconsultations were performed with the use of a telemedicine system operated by a healthcare entity offering healthcare services.

Each obstetric/gynecological teleconsultation analyzed in this study took place within 48 hours after the doctor was notified that a patient sought consultation. The patients could provide photographic documentation of their complaint and, after the consultation was completed, there was an opportunity to ask an additional question in case of any doubts or the need to obtain additional information by the consulting physician. Prior to undergoing a teleconsultation, each patient provided her past medical and family history.

Our study evaluated the age of patients using telemedicine consultation. We also recorded each patient's country of residence as well as the number of gynecological and obstetric teleconsultations (including the specific reason for the consultation).

Depending on their topic gynecological consultations were classified into five categories: contraception, gynecological endocrinology, preconception counseling, gynecologic oncology, infections, and ultrasound. Obstetric consultations were classified into three categories: pathology of pregnancy, pregnancy ultrasound, and prenatal screening tests.

RESULTS

We analyzed 244 teleconsultations conducted in 185 patients in the period between Dec. 1, 2016, and Mar. 31, 2018. Patients under 18 years of age were excluded from analysis. We also excluded those consultations that did not

fit clearly into one of the categories mentioned above as well as those conducted in a language other than Polish.

Out of all evaluated teleconsultations 188 were gynecological (76%) and 56 were obstetric (24%).

The mean age of a telemedicine system user was 28.2 years (SD = 7.02; age range = 18–60), and the median age was 27 years.

A vast majority of our telemedicine system users were women residing in Poland at the time (Fig. 1), with only 10% of patients residing abroad (n = 18).

Most patients consulted a physician only once, whereas 14% of patients underwent more than one teleconsultation (n = 26) (Fig. 2). Photographic documentation illustrating the complaint in question was submitted by 4.3% of patients (n = 8). An additional question was asked in 108 teleconsultations (43.5%). There was only one patient whose teleconsultation ended in an urgent referral to a hospital emergency room for an immediate in-person medical consultation. That teleconsultation was about signs and symptoms of preterm delivery. The diagnosis of preterm delivery was confirmed in the emergency room. Subsequently, the patient was admitted to a pathology of pregnancy ward.

Gynecological patients

The largest subgroup of gynecological patients were those women who sought consultation on contraception

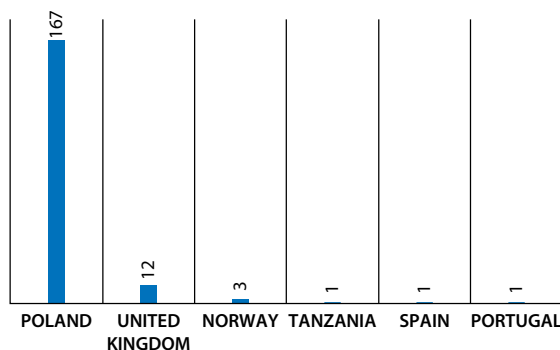


Figure 1. Evaluated patients stratified by their country of current residence

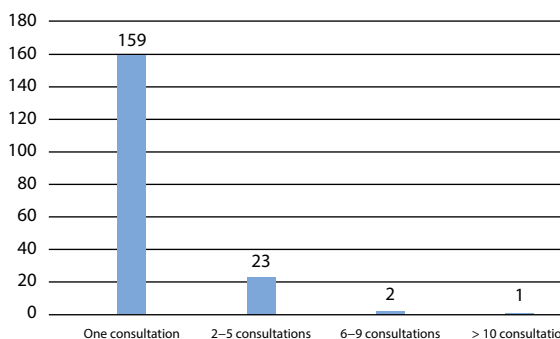


Figure 2. The number of consultations that the evaluated patients underwent

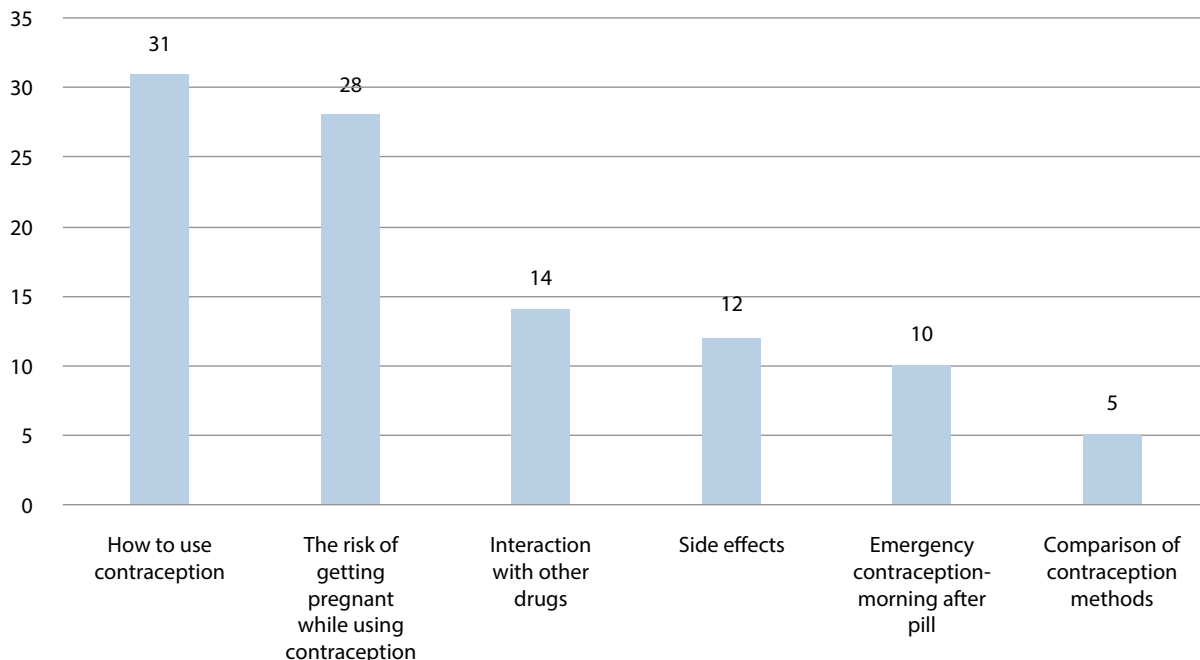


Figure 3. Specific reasons for contraception-related consultations

(n = 68). This subgroup of patients underwent a total of 100 teleconsultations. The more specific reasons for these consultations are presented in a bar graph (Fig. 3). The contraceptive method discussed most often was the combined oral contraceptive pill, which was the subject of 64% of contraception-related teleconsultations (53 patients).

The second largest group of women (28 patients) underwent teleconsultations on gynecological endocrinology (30 teleconsultations). The more specific reasons for those consultations are presented in a bar graph (Fig. 4).

Seventeen (17) patients sought a preconception teleconsultation (a total of 20 consultations).

Eleven (11) patients underwent 18 teleconsultations on gynecologic oncology, including screening assessments for female tumors.

Fourteen (14) patients underwent 14 teleconsultations on sexually transmitted diseases and vaginal infections.

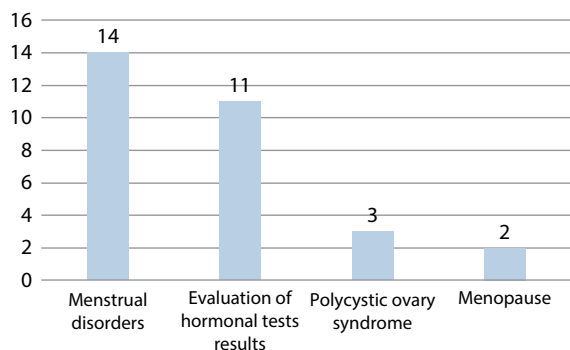


Figure 4. Specific reasons for endocrinological consultations

Six (6) patients underwent 6 teleconsultations to interpret sonographic findings of the female reproductive organs.

Obstetric patients

There were 37 teleconsultations for problems classified as pathological pregnancy (27 patients). The more specific reasons for those teleconsultations are presented in a pie chart (Fig. 5).

Fifteen (15) teleconsultations (in 10 patients) were performed to assess pregnancy ultrasound findings.

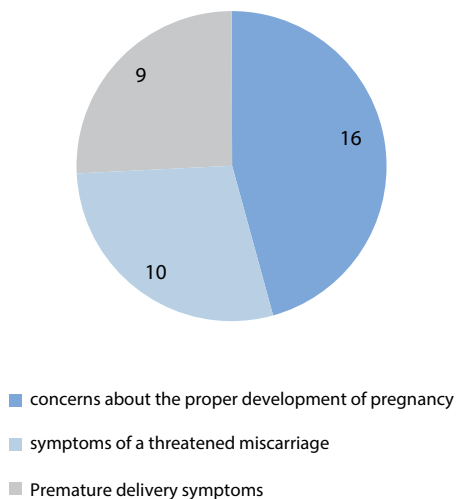


Figure 5. Specific reasons for consultations regarding pathology of pregnancy

Four (4) teleconsultations (in 4 patients) were on the topic of prenatal screening and counseling for genetic disorders.

DISCUSSION

A vast majority (86%) of the evaluated patients underwent only one teleconsultation. This indicates that patients tend to make use of a telemedicine consultation system sporadically, and mostly in situations when they suddenly develop a specific medical issue. Our study showed that most of those medical issues were not immediately life-threatening. Only one of the evaluated patients was urgently referred to a hospital. There were, however, patients (though not very many) who regularly used the means of telemedicine consultation regarding their health issues (Fig. 2). Once telemedicine systems become more common, the proportion of patients who use them regularly is sure to increase.

The telemedicine system evaluated in this study was used mainly by patients under 30 years of age. Despite the recently observed increase in the proportion of older patients using the internet for health-related purposes, statistical data shows that younger users are still predominant [8].

Ten percent of women seeking teleconsultation stated that they resided in a country other than Poland. The language barrier and medical consultation costs can prevent some patients from seeing a healthcare professional when they live abroad. Such obstacles can be easily circumvented with the use of a telemedicine system.

A vast majority of telemedicine consultations evaluated in this study were gynecological, most of which (53%) were on the issue of contraception. Over the last several years there has been in Poland a debate on the philosophy of life, which has been, unfortunately, permeated with political undertones. The point in question is the expansion of the so-called "conscience clause" to include not exclusively abortion but contraception as well. According to the expanded conscience clause doctors have the right to refuse prescribing contraceptive agents and pharmacists have the right to refuse the sale of these agents. Moreover, beside Hungary, Poland is one of the only two countries in the European Union where "the morning-after pill" is available only with a prescription. The fact that there was such a high proportion of consultations on the use of contraceptives, general comparison of various methods of birth control, and their side effects may be due to the misleading information on contraceptive agents propagated by the media in Poland as well as the philosophy of life currently advocated by certain Polish media.

Obstetric consultations constituted 24% of all the evaluated teleconsultations and were most commonly a result of the patients' concern for the proper development

of pregnancy despite the lack of tangible evidence of any pathology. Those patients simply needed reassurance that the course of their pregnancy was normal. The considerably lower number of obstetric patients in comparison to the number of gynecological patients seeking teleconsultations may indicate a tendency to seek in-person consultations, which make it possible to conduct routine tests to confirm the well-being of the fetus.

This study has a few limitations. Our single telemedicine system was used to collect data prospectively. Therefore, errors associated with patient selection and data collection cannot be excluded. Additionally, patient satisfaction was not taken into account.

An additional limitation was the low number of patients and consultations.

Nonetheless, this is the first original article on the use of telemedicine in obstetrics and gynecology in Poland and it may prove to be an important milestone in the development of telemedicine in this country.

CONCLUSIONS

Telemedicine systems are no longer thought of in future terms but are becoming our present reality. At present, their use already allows patients from many countries in the world an easier access to specialized healthcare professionals. This study illustrates the use and effects of a telemedicine system in Poland. This is the first such study in Polish-speaking women with obstetric/gynecological health issues. We hope that it will pave the way for further studies on the development of telemedicine networks dedicated to female healthcare, especially in countries where telemedicine is still on its way to becoming a popular and well-established method of contact between the patient and the doctor.

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