History of Ophthalmology

https://doi.org/10.31288/oftalmolzh202535964

Professor Sergii Volodymyrovych Filatov: Just a son in the shadow of a great father or a prominent ophthalmologist?

Bobrova N. F. [1], **Androsov O. G.** [2]

[1] SI "The Filatov Institute of Eye Diseases and Tissue Therapy of the National Academy of Medical Sciences of Ukraine"

[2] Odesa Region State Archive

Odesa (Ukraine)

Sergii Volodymyrovych Filatov was born on February 5, 1927, when the future Academician V. P. Filatov was 52 years old. As a late and only child, he enjoyed the special attention of his family. The boy's father, the future Academician Volodymyr Petrovych Filatov, was busy with his son's upbringing. He believed that his son's library should be composed of talented books on various fields of knowledge, and should not contain any "unnecessary, boring book that induces sleep" [1]. Volodymyr Petrovych taught Sergii the basics of playing piano (Fig. 1), painting and drawing (Fig. 2), and ethical behavior, and sowed the seeds of philosophical thinking in his son. He was helped by his distant relative, Oleksandra Vasylivna Glynka, who was living with the family as a housekeeper and replaced Sergii's mother (Fig. 3). Therefore, Sergii got a perfect basic education and upbringing, knew foreign languages, played piano and violin, and in general looked liked his father [2].

Initially he entered Odesa Maritime University. He and the son of V. Ie. Shevaliov dreamed of becoming sailors and voyaging around the globe. However, having completed their first year of study, they changed their minds and entered the Pirogov Odesa Medical Institute. Sergii was an enthusiastic student, and graduated from the medical institute in 1952 (Fig. 4), specializing in ophthalmology. He began working at the V. P. Filatov Ukrainian Experimental Institute of Eye Diseases.

It appears that Acad. V. P. Filatov had a foreboding of a difficult life path awaiting his only son; in his poem "To my son" [3], he cautioned Sergii against life's difficulties and advised how to overcome them.

First studies of the young doctor were on tissue therapy, a research topic that his father was fascinated by in the second half of his life. The topic was very important at that time. Sergii Filatov was technically skilled enough to improve the technique for implanting tissue material

Fig. 1. A music lesson: Sergii and Vladymyr Petrovych Filatov.

Fig. 2. A lesson of painting at the easel.

Fig. 3. V.P. Filatov, Sergii and Oleksandra Vasylivna Glynka at home

Fig. 4. Sergii Filatov after graduating from the Pirogov Odesa Medical Institute.

Fig. 5. Dr Sc (Med), Professor S. F. Filatov.

[4], which enabled grafting of preserved placenta easily. His subsequent clinical and experimental studies on the subject, along with detailed studies of histological preparations [5-6], were used as the basis for his Cand Sc (Med) thesis, "Comparative study of curative implantation of preserved tissue via injection versus dissection" [7], which was completed under the mentorship of Candidates of Science (Medicine) V. V. Voino-Yasenetsky and L. A. Dancheva. The thesis was successfully defended at the meeting of the Research Council of Odesa Medical Institute after the V. P. Filatov's death in 1958. Professors S. F. Kalfa and S. R. Muchnyk were Sergii Filatov's opponents.

Throughout the rest of his life Sergii Filatov worked at the retinal detachment department, the department dealing with the ocular pathology which was and is most difficult to manage. He worked his way up from attending physician to head of the department, doctor of medical science and professor (Fig. 5).

Those that worked with him remember him as a bright surgeon. He operated on the eye "beautifully and rather rapidly", neatly, with a good knowledge of the anatomy of the eye, and without making a fuss or causing trauma to adjacent ocular tissue. Sergii Volodymyrovych was a high-level ophthalmologist who considered research and treatment questions with a thorough knowledge of the literature (Fig. 6). As a human being, he was a very modest and delicate person, and never raised his voice when talking to his colleagues (Figs. 7-9). Sergii Filatov inherited his father's gift for drawing, painting and writing poetry. He liked playing sports, particularly tennis, and was a very hospitable host. Sergii Filatov was the only person in the neighborhood who had "KVN", a small black-and-white TV set equipped with a plastic magnifying glass filled with water, which was the first TV set ever mass-produced in the USSR. I remember that, together with other children living in the house for the employees of the institute, I used to be invited for watching TV at Sergii Filatov's home, with chairs and some refreshments already arranged for us.

This was the period of initial studies on retinal detachment, and there were many problems on the subject that were to be solved. There were challenging questions on the diagnosis and treatment of the disease, but this was a time when there were rapid advances in this field. Researchers were fascinated with the search for retinal tears using various ophthalmoscopic techniques, particularly a binocular ophthalmoscope (Fig. 10), the most advanced piece of equipment at that time.

Sergii Filatov critically reviewed the outcomes of treatment, and selected a rather difficult and unpopular but important subject for his doctoral dissertation, "Repeat surgery for recurrent retinal detachment and surgery failures" [8]. The dissertation was based on as much as 840 repeat retinal detachment surgeries. Of these, 823 were performed in patients with a severe form of retinal detachment. Moreover, 88 patients and 17 patients had repeat surgery in a single eye and both eyes, respectively. The duration of detachment exceeded the period of 3 months in 52.2% of patients, more than 3 quadrants were detached in 61.8% of patients, the number of procedures received was at least 3 in 19.8% of patients, an abrupt reduction in visual acuity to 0.01-0.1 was seen in 67.5% of patients, and a total loss of pattern vision was found in 28.4% of patients. Totally, 24 papers were published based on the dissertation material.

In order to approach such a difficult topic, one had to be not only a wonderful surgeon, but also a very brave person. The task was, however, fulfilled perfectly, and the causes of retinal re-detachment were found.

● The most common causes were not only inadequate blocking of the tear, but also the formation of new tears and rupture of the diathermal coagulation barrier (there

Fig. 6. S. V. Filatov and S. F. Vasyl'ieva in the pre-operating room

Fig. 7. Staff members of the retinal detachment department (from the right to the left): I. L. Baronetska, L. A. Linnik, I. M. Ganichenko, N. A. Romanova, S. V. Filatov, G. G. Melikhov, Ie. S. Pukhlyk, T. M. Milenka, N. Rasskazova, K. A. Sukariavichus

Fig. 8. Discussing a patient's condition at the department (from the left to the right): Iu. D. Babanina, N. A. Romanova, S. V. Filatov, K. A. Sukariavichus

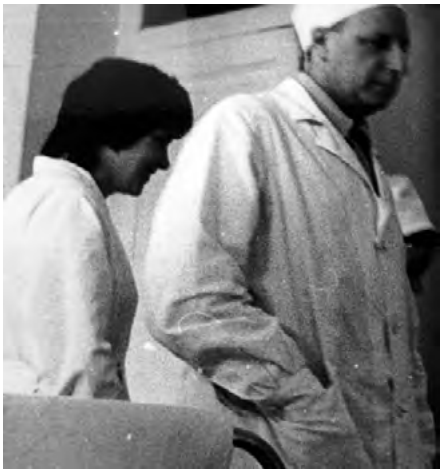

Fig. 9. N. A. Romanova and S. V. Filatov on their round through the department.

were only initial applications of laser and photocoagulation at that time).

● General eye diseases (progressive myopia, cystic retinal degeneration, etc.) were also found to be important.

● A scheme for selecting the technique for repeat surgery on the basis of retinal motility was developed.

● The first two weeks after previous surgery was found to be the best period for repeat surgery.

● Photocoagulation application development was started.

The dissertation was successfully defended at the Odesa Medical Institute in 1972. Sergii Filatov's doctoral dissertation advisor was Acad. N.O. Puchkovska, while Professors O. O. Katargina, I.S. Cherkasov and V. V. Voino-Yasenetsky served as external reviewers (opponents) for the dissertation.

Fig. 10. Dr Sc (Med) S. V. Filatov and Junior Researcher N. I. Nazarenko performing ophthalmoscopy with a binocular indirect ophthalmoscope.

In 1972, 1975 and 1976, the Ophthalmological Journal (Oftalmol Zh; issues nos. 6, 3 and 6, respectively) published special sections on the treatment of retinal detachment, retinal cysts and retinoschisis, with the articles by S.V. Filatov and colleagues [9-12] serving as basic articles for these sections.

In early nineteen seventies, the first pupils of S.V. Filatov defended their Cand Sc (Med) dissertations. These were K. A. Sukariavichus (Lithuania; 1970; "Clinical features and efficacy of surgical treatment for, traumatic retinal detachment" [13]), G. Iu. Iuodkaĭte (Lithuania; 1972; "Tissue changes in the normal eye versus the eye treated by diathermy coagulation combined with scleral reefing after partial vitreous replacement with silicone: experimental studies" [14]); B. B. Petrovski (Bulgaria; 1973; "Surgical treatment and photocoagulation for retinal detachment in the aphakic eye" [15]), and G. G. Melikov (Ukraine; 1975; "Surgical treatment combined with photocoagulation for retinal detachment" [9]).

In 1978, S. V. Filatov published the monograph "Retinal detachment" [16] (Fig. 11) in which he reviewed the recent advances in the field made both by the department he was heading and foreign researchers. The monograph was published in a large run of 11,000 copies, likely due to the importance and relevance of the material covered. A copy of the monograph was very cheap (40 kopecks per copy), and it is not surprising that the book was sold out rather rapidly. Considerable attention was given by the author to examination of the eye and search for, and location of, retinal tears. Basic scleroplasty procedures in retinal detachment and indications for these procedures were neatly described. The descriptions were illustrated with numerous schemes (Figs. 12, 13) which were drawn (most likely, by the author himself) while taking into account the topographic features of the eye. On the basis of his personal experience, the author presented data on the most common complications of surgical treatment for retinal detachment and re-detachment. A separate section was devoted to the intraocular injection technique (Fig. 14), with air, preserved vitreous body, luronit and/or silicone introduced into the eye. Actually, this was an additional intervention performed to increase the intraocular pressure prior to the completion of surgery for better re-attachment of the retina. S. V. Filatov believed that silicone is a not bad vitreous with regard to the physical and chemical characteristics. He, however, pointed to the development of pathologic lenticular and retinal changes at the sites of prolonged tissue exposure to silicone. The silicone quality was not sufficiently good at that time, but it was much improved subsequently. Nevertheless, prolonged vitreous tamponade with modern silicone oil can result in pathological changes (formation of posterior capsular cataract and degenerative changes in the retina and cornea) similar to those observed by S. V. Filatov, which is especially common in pediatric cases.

The monograph contained a separate section on retinal photocoagulation and laser coagulation in retinal detachment. The author described applications of numerous schemes for retinal photocoagulation either preceded or followed by surgery for retinal detachment (Fig. 15). In addition, the author believed that retinal photocoagulation could be used without surgery in cases of complete retinal adherence after staying in bed. Moreover, the monograph included data on the application of first lasers in the

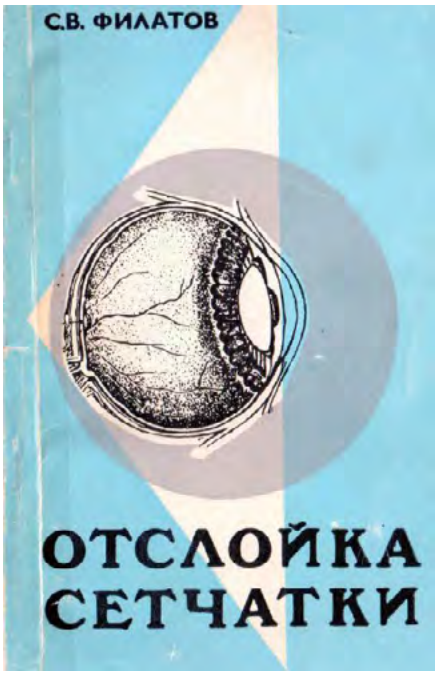

Fig. 11. A copy of S. V. Filatov's monograph "Retinal detachment" (1978)

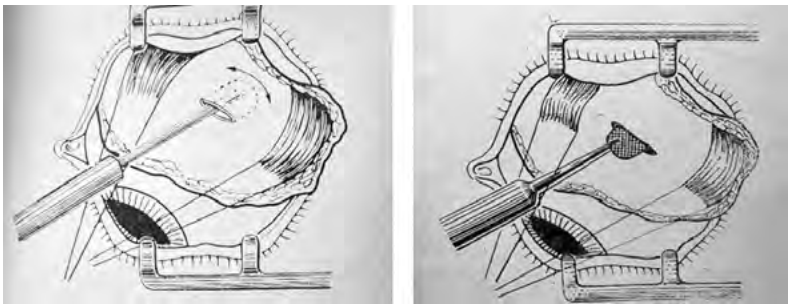

Fig. 12. Scheme of scleral buckling.

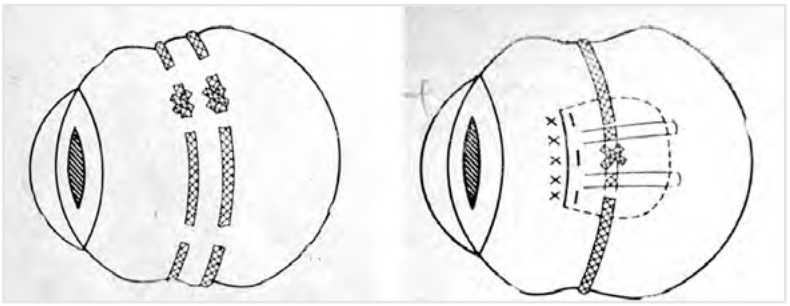

Fig. 13. Scheme of encircling with and without scleral buckling

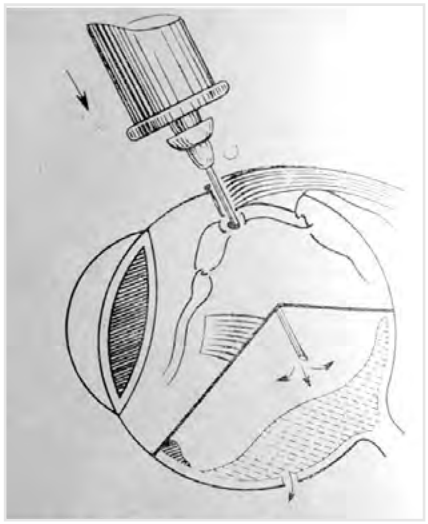

Fig. 14. Scheme of intraocular injection.

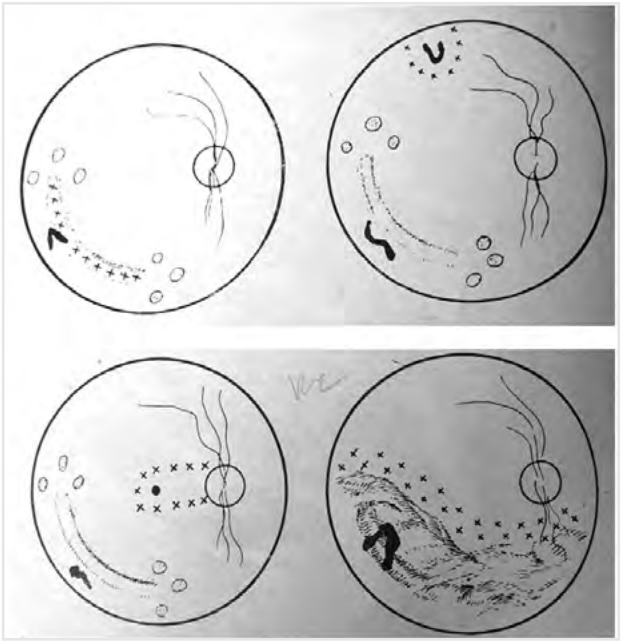

Fig. 15. Scheme of photocoagulation for various retinal tear locations.

treatment for retinal detachment by the author in cooperation with the future Professor L.A. Linnik, who initially worked at the retinal detachment department. "OK-1" and "OK-2" were the first ophthalmic lasers in the world developed in cooperation with researchers from the V.P. Filatov institute.

The academic library of the institute has a copy of the monograph which appears to have been touched by many hands and read by many ophthalmologists throughout time: the book is full of pencil notes and question marks, with the most important text fragments underlined several times. Therefore, the monograph is still rather relevant because (1) scleroplasty procedures are still performed based on indications, (2) various medications and vitreous substitutes may be injected into the vitreous, (3) retinal laser coagulation has become an essential component of retinal detachment surgery, particularly, the most advanced, vitrectomy, that could only be dreamed about in the past.

S. V. Filatov often participated in national and international ophthalmology conferences and congresses and represented the achievements of Ukrainian researchers in foreign countries, he easily communicated with foreign colleagues since he spoke foreign languages well.

In the last years of his life, he worked abroad, as a consulting ophthalmologist at the Havana eye hospital (Cuba) and as a leading eye surgeon in Algeria, for long periods of time (1978-1980).

Like his father, he was not only a very talented doctor, but also a gifted poet and painter. Unfortunately, his poems and paintings have not survived.

At just 53, Sergii Volodymyrovych Filatov passed away after a severe disease in 1980.

The contribution of S. V. Filatov into the contemporary retinal detachment surgery has been underevaluated: many of the techniques used today (scleral buckling procedures, silicon tamponade, retinal laser coagulation, etc.) have been envisaged by him due to his innate abilities and critical and contrarian thinking based on abundant personal experience. His works were known to a narrow circle of retinal detachment specialists. His achievements were somewhat kept silent about in the institute he worked at, and the retinologists of today barely know about them.

While evaluating the life path S. V. Filatov has walked through, one comes to grips that his fate was somewhat tragic. After all, somewhat caused a talented surgeon, scientist and inventor to leave his lovely city and the institute (the lovely brainchild of his father whom he loved and respected so much) in the final phase of his career.

The time has come to restore the memory of Sergii Filatov as not only the son of a well-known Academician V.P. Filatov, but also as a prominent ophthalmologist of his time.

Acknowledgement: The authors thank Cand Sc (Med) N. A. Romanova, a former staff-member of the retinal and vitreal pathology department, Iu. M. Vilkun, Director of the Acad. Filatov Museum and Exhibition Complex, and the staff of the academic library headed by D.V. Gorshkov, for providing material and photographs.

References

1. Filatov VP. [The last speech]. Donetsk: Nord-Press; 2008. Russian.
2. Kovalenko NB. [Pages of our history]. Odessa: Aprel; 2018. Russian.
3. Filatov VP. [Life… and Thoughts… and Love. Selected poems]. Odessa: Reklam servis; 2008. Russian.
4. Filatov SV, Filatova ZA. [Improved syringes for implanting tissue material]. Oftalmol Zh. 1952;3:191-2. Russian.
5. Filatov SV. [Clinical and experimental observation of the impact of tissue implants injected with a screw syringe on the body]. Oftalmol Zh. 1956;6: 398-403. Russian.

6. Filatov SV. [Comparative observation of the resorption of tissue implants introduced with a syringe or as a piece of tissue]. Oftalmol Zh. 1956;6:403-8. Russian.
7. Filatov SV. [Comparative study of curative implantation of preserved tissue via injection versus dissection]. Abstract of Cand Sc (Med) Thesis. Odesa: Filatov Ukrainian Experimental Institute of Eye Diseases; 1956. Russian.
8. Filatov SV. [Repeat surgery for recurrent retinal detachment and surgery failures]. Abstract of Dr Sc (Med) Dissertation. Odesa: Filatov Odesa Research Institute of Eye Diseases and Tissue Therapy; 1972. Russian.
9. Filatov SV, Melikov GG. [Possible use of photocoagulation for prevention of recurrent retinal detachment]. Oftalmol Zh. 1972;27(6):423-7. Russian.
10. Filatov SV, Babanina IuD, Romanova NA. [Effectiveness of surgical treatment for retinoschisis]. Oftalmol Zh. 1975;30(3):169-73. Russian.
11. Filatov SV, Melikov GG. [Use of photocoagulation in combination with surgery in retinal detachment with multiple rupture]. Oftalmol Zh. 1977;32(6):408-12. Russian.
12. Filatov SV, Sukariavichus KA. [Efficacy of surgical treatment for traumatic retinal detachment]. In: Proceedings of the 5th ophthalmology conference. Vilnius, 1973;3:183-7. Russian.
13. Sukariavichus KA. [Clinical features and efficacy of surgical treatment for, traumatic retinal detachment]. Abstract of Cand Sc (Med) Thesis. Odesa: Filatov Odesa Research Institute of Eye Diseases and Tissue Therapy; 1970. Russian.
14. Iuodkaĭte G. Iu. [Changes in ocular tissues as an effect of silicone on the vitreous body]. Oftalmol Zh. 1971;8:596-9. Russian.
15. Petrovski BB. [Combination of intrascleral buckling with dura mater circling for retinal detachment in aphakic eyes]. Oftalmologiia. 1972; 1:21-24. Bulgarian.
16. Filatov SV. [Retinal detachment]. Moscow: Meditsina; 1978. Russian.

Disclosures

Received: 31.01.2025

Accepted: 11.03.2025