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FROM FRANCE TO RIJEKA: THE COURSE AND LEGACY OF FIRST KIDNEY TRANSPLANTATION IN YUGOSLAVIA

IZ FRANCUSKE U RIJEKU: TIJEK I NASLJEĐE PRVE TRANSPLANTACIJE BUBREGA U JUGOSLAVIJI

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SUMMARY

The article analyses the course and legacy of the first successful kidney transplantation in socialist Yugoslavia, performed in Rijeka on 30 January 1971 under the leadership of Prof. Vinko Frančišković. It is based on a combination of secondary literature, newspaper sources, and limited archival documents, thereby approaching this medical event from a historiographical perspective as well. Particular emphasis is placed on the preparations of the Rijeka medical team, which involved international cooperation, especially with France. The procedure itself, carried out as a kidney transplant from mother to son, was successful, but was accompanied by intense media attention and even a degree of professional scepticism. An analysis of archival documents from the 1970s demonstrates that this transplantation stimulated further development in transplantation medicine, while also raising broader questions regarding the organization of the healthcare system, its financing, and the status of patients undergoing dialysis.

***Keywords**: kidney transplantation, Rijeka, 1971, medical international cooperation, Vinko Frančišković, history of surgery, Necker hospital*

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Introduction

The article examines the course and consequences of kidney transplantation in Rijeka, including the first successful kidney transplant in socialist Yugoslavia, performed in January 1971 by a multidisciplinary expert team led by Prof. Vinko Frančišković. For the first time in English and aimed at an international audience, the study builds on previously published literature while also offering new insights through a more detailed analysis of contemporary periodical sources covering the event. In doing so, it shifts the focus beyond a narrowly medical perspective and provides an additional historiographical contribution. In addition to synthesizing data from the daily press, the study sought to present information on the transplantation based on primary sources, particularly archival materials. Unfortunately, no archival records of this event have been preserved, representing a clear loss of direct evidence. Nevertheless, contemporary newspapers and the recollections of participants help bridge this gap, enabling the reconstruction of both the network of actors involved and the timeline of the procedure's preparation.

Also, archival materials from the 1970s relating to the Croatian healthcare system are rich in documentation of subsequent developments in transplantation medicine. Given that the name of Prof. Frančišković appears in these records, this study offers a more detailed analysis of the consequences of the first kidney transplantation. In particular, it draws on correspondence with a German hospital concerning the availability of artificial kidney (dialysis) therapy in Yugoslavia, as well as on evidence of the multi-year efforts of patient associations and the republican secretariat to secure formal recognition of the status of dialysis patients through the development of models ensuring access to their treatment.

Rijeka in the 1960s and 1970s

The social and political context of Rijeka during the 1960s and 1970s is important for understanding the circumstances, as well as for possibly understanding why this kind of medical procedure took place precisely in Rijeka. The turn of the decade in political history was highly turbulent because of the student movement of 1968 and the Croatian Spring of 1971, but in this context, these events are of secondary importance. More important are the deeper structures of the city's historical dynamics during that period.

In Rijeka and Istria, the 1960s were marked by steady and gradual economic growth, the expansion of infrastructure, and the partial implementation of certain reform measures (Dukovski, 2007, p. 57). Rijeka was characterized by a major population shift, meaning significant emigration as well as immigration, while

the city's administrative importance was confirmed in 1966, when Istria became part of the Rijeka district, leading Rijeka to be perceived as a northern Adriatic metropolis (Dukovski, 2007, pp. 58–59). The Municipality of Rijeka covered an area of 523 square kilometers and, according to the 1971 census, had 160,044 inhabitants. Between 1961 and 1971, Croats made up 70–80% of Rijeka's population, and in 1970/71, seven percent of the total immigrant population settled there (Dukovski, 2007, p. 63). In 1971, 57,307 people were employed in Rijeka, mostly in industry and mining, which corresponded to the Yugoslav average of 33.5% of the economically active population working in industry (Dukovski, 2007, p. 68). In terms of investments, at the turn of the decade the position of Rijeka and the city's development strategy became highly debated, and it was during this period that ideas about future projects such as the Učka Tunnel, the Krk Bridge, the Zagreb–Split highway, and the Rijeka–Trieste road began to take more concrete shape (Dukovski, 2007, pp. 73–101).

Although the first transplantation took place in a hospital, the university also played a key role in every sense. The University of Rijeka was created amid a wave of post-war optimism and reconstruction, although it formally existed as a constituent part of the University of Zagreb. The fastest growth of higher education occurred in the 1960s, which led to a rapid increase in the number of students in the city. The Faculty of Medicine was founded in 1955/56 and is, as such, the oldest faculty in Rijeka. From its establishment, it was closely connected with hospital healthcare through cooperation and soon established postgraduate studies as well, enabling it to adequately supply personnel for both the hospital and the faculties, thereby contributing to its sustainability (Roknić Bežanić, 2021, pp. 40–41, 43). From the beginning of the 1960s until 1971, the number of students in the city increased fourfold, which was above the Yugoslav average growth rate of 40% (Roknić Bežanić, 2021, p. 45).

The beginnings of kidney transplantation

The first kidney transplant in the world was performed in 1933 in Ukraine (then part of the USSR). It was carried out by the surgeon Yuriy Voronoy, who chose the thigh as the site of implantation. Parallel attempts took place in the United States after the Second World War. Charles Hufnagel performed a transplant as early as 1945, and in 1950, Richard Lawler carried out a similar procedure. However, he faced strong criticism, which led him to abandon further work in this area. Nevertheless, his efforts encouraged French physicians to shift from experimental work on dogs to attempts at human transplantation. France conducted its first such attempt only a year later, but the most influential figure in advancing

transplantation trends in the 1950s was Prof. Jean Hamburger, who worked at the Necker Hospital. This hospital would later become the place where, some twenty years afterward, physicians from Rijeka received training in preparation for their first kidney transplant (Langer, 2019, pp. 13–26).

The spirit of the 1970s – innovation in context

The early 1970s were marked by a sense of optimism in the Western bloc, largely due to the Moon landing of the Apollo 14 crew, even as numerous proxy wars continued to unfold globally within the framework of Cold War divisions. In Croatia, then a federal republic within Yugoslavia, the situation was far from ideal. Just prior to the transplantation itself, Nikola Papić, Secretary for Health and Social Welfare, gave an interview to a Zagreb newspaper addressing projections for the healthcare system in 1971. He stated that "only through great efforts of healthcare workers and the healthcare sector as a whole will it be possible to maintain, even partially, the level of healthcare provision achieved in 1970." The interview covered a wide range of issues, including improved conditions for children and pregnant women, birth rates outside healthcare institutions, and the epidemiological situation concerning scarlet fever, meningitis, tetanus, and intestinal infections. It also addressed staffing levels for medical personnel in certain remote areas, as well as preparations of the healthcare system for the upcoming tourist season (Korošec, 1971, p. 5). It is important to emphasize that in this key interview with the most powerful figure in Croatian healthcare, there was no mention whatsoever of transplantation, nor even of kidney diseases as such.

Preparations of the Croatian team for the procedure

It is difficult to determine the exact date when preparations for the transplantation began. In his recollections, Dr. Petar Orlić notes that he was employed as a resident in August 1967 at the Surgical Clinic of the "Dr. Zdravko Kučić" Hospital, together with Dr. Andrej Gudović. They learned that regular hemodialysis had been introduced a year earlier under the supervision of Dr. Jerko Zec. Upon beginning their work, they observed that experiments on dogs were already underway, aimed at studying kidney transplantation as well as open-heart surgery (Orlić, 2020, p. 398). The Head of the Department of Surgery at the hospital was Prof. Dr. Vinko Frančišković, originally a military surgeon who led surgical teams within Partisan units during the Second World War. After the war, he specialized in urological surgery. He furthered his training in Italy, the United Kingdom, and France (Primc et al., 2017), and in 1959 he published in the Brit-

ish Journal of Urology, where he addressed the topic of the intrathoracic kidney (Frančišković & Martinčič, 1959).

As a highly respected expert of great vision, Frančišković enabled Orlić to take advantage of a scholarship in Paris, where he became acquainted with the work of the Necker Hospital, which had already performed 52 kidney transplants. Orlić arrived in late December 1968 and was assigned to Assistant Dr. Michel Leski, with whom he remained throughout his stay. During this period, Orlić met patients and witnessed 15 kidney transplantations. On one occasion, he encountered a young girl from Zagreb who had moved to Paris with her family specifically to undergo a kidney transplant. Orlić also collaborated with the pathologist Prof. Dr. Jean Berger. Importantly, Orlić observed a kidney transplant from a living donor, performed by the urologist Jean Auvert, the surgeon Michel Lacombe, and Dr. Michel Leski, his mentor during the stay. At the Necker Hospital, Orlić also met the then Head of the Urology Clinic, Roger Couvelaire, a pioneer in the use of intestinal grafts in urology (Orlić, 2020, pp. 399–400).

Meanwhile, a team of physicians in Rijeka, led by Prof. Dr. Vinko Frančišković, conducted experimental kidney transplantations in dogs in 1968. The team was subsequently expanded to include members from the Institute of Physiology at the Faculty of Medicine in Rijeka and the Institute of Immunology in Zagreb. In 1970, three Rijeka physicians attended a course on organ transplantation in Lyon; two of them were members of the European Dialysis and Transplant Association. Two patients from Rijeka underwent tissue typing in laboratories in Lyon and Los Angeles, which yielded satisfactory results (Latković, 1971, p. 5). Orlić notes that he himself was among the participants at the course in Lyon, led by the nephrologist Prof. Jules Traeger. He further states that he and Frančišković returned to Lyon in 1971, where the idea of establishing *Jugotransplant* was developed (Orlić, 2020, p. 401).

In the spring of 1969, Orlić closely followed the scientific meeting *Actualités Néphrologiques*, which was attended by the renowned Prof. John Merrill from Boston. Orlić's aim was to obtain information on kidney transplantation from deceased donors (which later led the Rijeka physicians Andrej Gudović and Duje Vukas to visit Aarhus in Denmark). In mid-June 1969, Orlić arranged with Michel Lacombe for Prof. Frančišković to visit Paris and observe a kidney transplant from a living donor. After witnessing the procedure, Frančišković began assembling a team, establishing a Transplantation Section that included additional representatives from the Institute of Physiology at the Faculty of Medicine in Rijeka and the Institute of Immunology in Zagreb. The section was headed by Prof. Frančišković

and Prof. Šime Vlahović, with Daniel Rukavina serving as secretary. The Zagreb institution was represented by Prof. Dr. Vlatko Silobrčić (Orlić, 2020, p. 401).

In April 1970, Frančišković's deputy, Primarius Branko Fink, read a report about a kidney transplant performed in Ljubljana, in which the recipient died from an infection after two weeks. Thus, the first transplantation in Yugoslavia had been unsuccessful, leaving only one hospital in a position to achieve the first successful breakthrough. Frančišković and his team resolved to undertake this challenge (Orlić, 2020, p. 401).

Course of the transplantation

Novi list, a regional daily newspaper covering Istria, Rijeka, and the Kvarner region, announced in its 29 January 1971 issue that Croatia's first kidney transplantation would be performed at the General Hospital "Dr. Zdravko Kučić" in Rijeka ("Sutra!", 1971, front page). The hospital was located in the eastern part of the city, in Sušak, and today forms part of the Clinical Hospital Centre Rijeka (Sušak locality). In the weekend edition, journalist Ivona Latković published a full-page article also announcing the transplantation. The article was framed within a broader story about the newly expanded Dialysis Centre at the Surgical Clinic of the General Hospital "Dr. Zdravko Kučić," one of the few such centres in the country. On that occasion, Dr. Jerko Zec, head of the centre, gave an interview to *Novi list*. Zec explained how dialysis functions, both through the "artificial kidney" method and through peritoneal lavage. The Sušak hospital had acquired artificial kidney equipment as early as 1961, making it the second institution after Ljubljana to do so; such devices were introduced later in Belgrade and Zagreb. The initial use was experimental and conducted on dogs, while the first application on a human patient took place in 1962. A further modernization of equipment in 1966 enabled the treatment of patients with chronic kidney failure. Dr. Zec emphasized that the American physician Belding Hibbard Scribner was a pioneer of artificial kidney technology, who first applied the method in 1960, demonstrating that Rijeka's physicians adopted Western medical technology relatively rapidly (Latković, 1971, p. 5).

The mention of Scribner is highly significant, as he was an American nephrologist who developed a device for long-term hemodialysis, thereby saving many patients' lives (Blagg, 2007). Nevertheless, Dr. Zec emphasized that Yugoslavia lagged behind other European countries in the establishment of dialysis centres. He also explained the connection between dialysis and transplantation, noting that a successful transplant frees the patient from dependence on the machine,

thereby creating capacity within the centre to treat a new patient. The final question posed by journalist Latković was, logically, whether preparations for kidney transplantation were underway at the Sušak hospital. Dr. Zec responded affirmatively and provided an overview of the activities of the medical team led by Dr. Frančišković (Latković, 1971, p. 5). This premature announcement of the transplantation greatly angered Prof. Frančišković. The journalist was aware of the information and chose to publish it because *Novi list* did not appear on Sundays, meaning that other newspapers might have broken the story first. Frančišković, on the other hand, wished for the procedure to be carried out discreetly, which led to strained relations with journalist Latković (Orlić, 2020, p. 407).

The transplantation was performed on Saturday, 30 January 1971, in the morning. Following the operation, a press conference was held, at which the director of the "Dr. Zdravko Kučić" Hospital, Dr. Radoslav Peteh, briefly stated that the team led by Prof. Frančišković had carried out the procedure on a 34-year-old patient, whose mother, aged 49, had donated a kidney. Congratulations on the successful operation were extended by Dragutin Haramija, President of the Executive Council of the Parliament of the Socialist Republic of Croatia, and Neda Andrić, President of the Municipal Assembly of Rijeka (Latković, 1971, p. 9).

Journalist Latković proved to be correct: national media reported on the transplantation on the very same day. Thus, *Večernji list* published the same information, adding that the achievement of Prof. Frančišković was all the more significant given that healthcare in the Socialist Republic of Croatia generally received limited funding, and that no funds at all had been allocated for experimental work in Rijeka (P., 1971, *Presađen bubreg*, p. 3). The thesis regarding a lack of funding can be explained through the university policy in Rijeka. As noted in the introductory chapter, Rijeka's faculties were formally under the University of Zagreb, and Rijeka students were dissatisfied with this relationship. In the words of historian Andrea Roknić Bežanić, "it became clear that the faculties, colleges, and higher schools in Rijeka did not receive the same treatment as the Zagreb faculties, particularly with regard to the allocation of financial resources […]. One of the problems […] was also a certain isolation from many significant initiatives of republican and federal educational institutions" (Roknić Bežanić, 2021, p. 55).

Vjesnik, on the other hand, offered no additional commentary, merely noting that the identities of the patient and his mother were still being kept confidential (P., 1971, *Za 43 minute*, p. 3). Although the operation itself was successfully performed, some time had to pass before it could be determined whether the organ would be rejected, which ultimately defines the overall success of the transplantation. For this reason, public interest in the following weeks focused on continuous

monitoring of the patient's condition. Journalist Latković (this time signing only with initials) wrote that she asked Prof. Frančišković to "once again" explain when the outcome of the operation could truly be considered successful. She noted that Frančišković, "though not willingly," explained that a period of 10 days to three weeks represented an acute phase, during which there was a risk of the organism rejecting the foreign body (L., 1971, p. 4). The same information was confirmed for Zagreb newspapers by Jerko Zec (T., 1971, p. 3; P., 1971, p. 3).

The following day, a *Novi list* journalist was given the opportunity to speak with the mother who had donated the kidney. Her name was not disclosed, but the article makes it clear that she came from a modest family that had considered undergoing the transplant abroad and had followed reports of the attempted transplantation in Ljubljana. Accepting all possible risks, they waited nearly a year for the Rijeka medical team to complete all the necessary preparations (Latković, 1971, p. 3). In some newspapers, however, the names of the patients were published, which provoked a strong reaction from Director Peteh: "As if the Rijeka medical team had planted kidneys in a field and was now going out to harvest them." The reports also mention skeptical voices within certain medical circles, who questioned how such a relatively small hospital as the one in Rijeka could undertake procedures of this kind, criticizing the team as being insufficiently prepared (T. & P., 1971, p. 10).

Ultimately, the identity of the patient became known – Vlado Čakardić. Various newspapers referred to him differently, at times as Čakarević or Čararević (*Večernji list*, 8 February, p. 10); however, the tissue-typing documentation clearly identifies him as Vladimir Čakardić (Beutel, 1971).

In the weekend feature of 13–14 February, *Novi list* published an article titled "Who Are You, Professor Frančišković?" From a textual perspective, the article is strangely framed. At the outset, journalist Latković explains the reasons why the newspaper had published the announcement of the upcoming transplantation. Bearing in mind Orlić's recollections and the strained relationship between Frančišković and the journalist, this part of the article may be interpreted as a form of justification. The title suggests an interview; however, the text itself states that no interview actually took place, as "the professor's uncompromising stance (when it comes to the press) is already traditional." Consequently, the upper half of the newspaper page is devoted to well-known biographical information about Prof. Frančišković, while the lower section contains an interview with Prof. Šime Vlahović, Head of the Institute of Physiology at the Faculty of Medicine in Rijeka and a member of the transplantation team. The article notes, by way of introduction, that Prof. Vlahović had worked on issues of transplantation immunobiology

during his time at Columbia and Harvard Universities, which is significant as it represents a second axis of international cooperation in healthcare, alongside the French connections established by Orlić and Frančišković (Latković, 1971, p. 5).

Returning to the patient, newspapers published daily brief notes on his medical condition, consistently reporting that he was doing well and that everything was proceeding according to plan. The next significant event occurred when the patient left the isolation room and met his mother. The encounter was emotional and filled with joy, and the media documented it in detail. At that point, Director Peteh stated that they did not seek publicity, as it could be as harmful as it was beneficial to the hospital (P., 1971, p. 10). The patient himself gave a brief statement, saying that he felt well. *Novi list* also reported that Vlado came from a very modest family and that his living conditions were not adequate for someone recovering from such an operation. However, there were indications of improvement, as his workplace had made considerable efforts to support the family (Latković, 1971, p. 7).

The same report also featured a group photograph of the transplantation team: Dr. Petar Orlić, Dr. Ksenija Vujaklija-Stipanović, Prof. Dr. Šime Vlahović, Prof. Dr. Vinko Frančišković, Dr. Tomislav Tićac, Dr. Jerko Zec, Dr. Gianpaulo Velčić, Dr. Miomir Zelić, Dr. Damir Dimec, Dr. Nikola Gržalja, Dr. Ante Rukavina (in fact Danijel Rukavina; the newspaper contained a typographical error, author's note), Dr. Ante Šepić, Dr. Alenka Suzanić, Dr. Vjerislav Peterković, Dr. Duje Vukas, Dr. Marija Rakidžija, Dr. Branimir Budisavljević, and Dr. Andrej Gudović. Their average age was 37, which is remarkably young for performing such a complex procedure (Latković, 1971, p. 7).

The process of media monitoring of the patient concluded when the hospital convened a press conference at which both the patient, Vlado Čakardić, and Prof. Frančišković addressed the public. Čakardić reiterated that both he and his mother were feeling well and that he now finally had the opportunity to lead a healthy life. Dr. Orlić was also present at the press conference and spoke about the critical phase for the patient, noting that the risks were now minimal as the most dangerous period had passed. Journalists asked Prof. Frančišković when the next kidney transplantation might take place, given that the team was now experienced and prepared following this successful pioneering procedure. Frančišković's response is particularly indicative of future directions. He stated that "in the second phase of our work, we intend to perform transplantations using healthy organs from deceased individuals. However, it is precisely here that problems of a purely legal nature arise, since this matter has not yet been regulated in our legislation" (Latković, 1971, p. 6).

The legacy of the procedure at the national level

The first official professional publication on the Rijeka transplantation appeared in the August 1971 issue of *Liječnički vjesnik*. The case report was authored by Frančišković, Vlahović, Zec, Orlić, and Peterković. In the introduction, they state that "this is the first successful kidney transplantation in Yugoslavia." A footnote indicates that the study was "partially supported by funds from the Federal Fund for Scientific Work of Yugoslavia, No. 3240/1, 1969." As expected, the text is rich in specialized medical detail. In the conclusion, however, the authors provide more extensive information on international cooperation, noting that they adopted "ureterostomy via Redon drainage performed through a nephrostomy, which we had the opportunity to observe in Lyon." A footnote at the end of the sentence specifies that the authors express their gratitude to H. Beutel from the Blood Transfusion Centre in Lyon, who performed tissue typing for both the donor and the recipient (Frančišković et al., 1971).

An examination of archival materials held in the Croatian State Archives, specifically within the *фонд* (fond) of the Republican Committee for Health and Social Welfare of the Socialist Republic of Croatia (1965–1990), reveals that documents relating to the year 1971 have not been preserved. In other words, the available records extend up to the late 1960s, while the next documents that appear are predominantly from 1972 or 1973. Nevertheless, these later materials allow for a reconstruction of the broader context and consequences of the transplantation in Rijeka. Thus, two documents from September 1973 are available. The first, written in German (with an additional Croatian translation in a separate document), is signed by Dr. Luttgen of the *Medizinische Universitäts-Poliklinik*. It consists of an inquiry addressed to the Yugoslav health authorities regarding the institutions in which treatment with an artificial kidney was available. The second document is a handwritten response from the Yugoslav consulate, stating that artificial kidney therapy was available in five federal republics (Croatia, Serbia, Slovenia, Bosnia and Herzegovina, and Macedonia). For the Socialist Republic of Croatia, the listed centres were Zagreb, Rijeka, Osijek, and Split ("Korespondencija njemačke sveučilišne poliklinike s jugoslavenskim konzulatom", 1973).

Furthermore, following Frančišković's earlier remarks on the need for legal regulation of transplantation, archival documents indicate that the issue remained unresolved even five years later. A document dated April 1976 reveals correspondence in which the Republican Secretary, Dr. Herma Kraus-Delpin, forwarded to the Federal Committee for Health and Social Welfare in Belgrade a copy of a letter written by Prof. Frančišković, with the aim of obtaining information on the stage

reached in the legal regulation of transplantation from deceased donors ("Korespondencija republičkog sekretarijata i saveznog komiteta za zdravstvo i socijalnu zaštitu s prijepisom dopisa prof. Frančiškovića", 1976).

In this document, formally issued by the "Dr. Zdravko Kučić" Hospital and the Yugoslav Association for Dialysis and Transplantation in Rijeka, Frančišković emphasizes that transplantation is an effective method of treatment that removes patients from dialysis. He notes the growing number of transplant recipients and argues that this development necessitates urgent legal regulation. He states that the first initiative originated from "a commission of the Federal Assembly," which drafted a Model Law on the Transplantation of Human Organs for Therapeutic Purposes. However, this initiative lost momentum following the adoption of the Yugoslav Constitution of 1974, under which it was assumed that individual republics would regulate transplantation independently—an expectation that ultimately proved unsuccessful. In addition, Frančišković highlights another issue, namely the financing of dialysis and transplantation. Given the high cost of these procedures (approximately 300,000 new dinars annually), he argues that they place a significant burden on certain insurance communities. He therefore proposes that such procedures be financed through the self-managing interest communities of health insurance for workers, farmers, and the healthcare sector. At the conclusion of the letter, he refers to examples of good practice in the Socialist Republic of Serbia and signs the document in his capacity as the president of the Executive Board of Jugotransplant ("Korespondencija republičkog sekretarijata i saveznog komiteta za zdravstvo i socijalnu zaštitu s prijepisom dopisa prof. Frančiškovića", 1976).

Concrete developments occurred in March 1979, when the Federal Committee in Belgrade was informed by colleagues from Zagreb that a proposal for drafting federal guidelines on the methods and criteria for determining death would be prepared by an expert commission appointed by the Republican Secretariat for Public Health and Social Welfare of the Socialist Republic of Croatia. A review of the seven-member commission indicates a significant role played by Rijeka-based experts. The chair was Prof. Dr. Vladimir Palmović from Zagreb, affiliated with the Institute of Forensic Medicine and Criminalistics at the Faculty of Medicine. The members from Rijeka included Prof. Vinko Frančišković, Dr. Jerko Štampalija from the "Braća dr. Sobol" Hospital (today part of the Rijeka Clinical Hospital Centre), and Prof. Dr. Branko Volarić from the Institute of Forensic Medicine at the Faculty of Medicine in Rijeka ("Obavijest Saveznom komitetu u Beogradu o formiranju stručne komisije za utvrđivanje smrti", 1979). This is particularly significant given the fact that, by the late 1960s, Rijeka's faculties were underrepre-

sented "in terms of participation in the committees of individual councils, as well as in other activities of republican significance" (Roknić Bežanić, 2021, p. 55).

In October 1979, interdepartmental correspondence between the secretariats for health and internal affairs reveals the efforts of the Association of Hemodialysis and Kidney Transplant Patients from Rijeka to obtain permission to place a special sticker on their vehicles, which would allow them to travel to the hospital without restriction, regardless of the odd-even driving limitations introduced during the oil crisis. The justification explains the nature of hemodialysis and its crucial importance for preserving patients' lives, emphasizing the necessity of arriving at the hospital on time. It notes that reliance on public transport is not advisable due to potential delays or disruptions, while the use of ambulance services would be excessively costly and impractical. By issuing such a sticker, the association sought for these patients to be treated as persons with physical disabilities ("Korespondencija sekretarijata za zdravstvo i unutrašnje poslove na temu posebne naljepnice na autima", 1979).

The Republican Secretary for Health, Prof. Dr. Boško Popović, wrote to the Rijeka association expressing his support for their initiative before the Secretariat for Internal Affairs. He also suggested that they launch a dedicated campaign with the Union of Health Insurance Communities for Workers and the Healthcare Sector of Croatia, as well as with the Community of Pension and Disability Insurance for Workers of Croatia ("Korespondencija sekretarijata za zdravstvo i unutrašnje poslove na temu posebne naljepnice na autima", 1979).

An additional document from September 1979 is also preserved in the archives, representing the association's initial address to the Secretariat. While it reiterates the previously mentioned arguments, it also provides further information. The Rijeka association states that patients receiving treatment at the Rijeka hospital came from a wide range of locations, including Banja Luka, Mostar, Doboj, Brčko, Zagreb, Belgrade, Senj, Gospić, Zadar, Imotski, Dubrovnik, Kruševac, Zaječar, and Slavonska Požega, and occasionally even from the autonomous provinces of Vojvodina and Kosovo, as well as from the republics of Macedonia and Montenegro. The document also highlights an additional social issue: due to the necessity of treatment, patients were often required to relocate to cities where hospitals were located. Many were unemployed and had to seek private accommodation. Once again, the Socialist Republic of Serbia is cited as a positive example, where such a vehicle sticker had been promptly introduced as a matter of public policy. The document is signed by the president of the association, Milan Bjeliš ("Obrazloženje riječke udruge hemodijaliziranih i transplantiranih bubrežnih bolesnika na temu posebne naljepnice na autima", 1979).

Conclusion

The first kidney transplantation performed in Rijeka in 1971 was the first successful transplantation in the whole of Yugoslavia. It represented one of the key milestones in the modernization of Croatian healthcare and in keeping pace with Western innovations in diagnostic and therapeutic procedures. Rijeka's physicians carried out this undertaking despite limited state funding and the modest infrastructure of a hospital that was still in the early stages of development. Therefore, the key factor behind the success of the first transplantation lay in the highly trained medical personnel, who made optimal use of international contacts to gain experience at leading institutions, particularly in France.

With regard to the course of the operation and the postoperative process, the relationship between the healthcare institution and the public is particularly noteworthy. As is often the case, the media closely followed developments within the hospital and, given the pioneering and highly complex nature of the procedure, strong public interest was to be expected.

The latent tensions between Prof. Frančišković and journalist Latković—arising from the unilateral publication of the announcement of the operation and the professor's refusal to give an interview—reflect a natural and reasonable caution. Such procedures, with a significant risk of failure, were ideally to be communicated only after a certain temporal distance, once their success could be more reliably assessed.

An important insight offered by this article is the identification of the absence of archival materials related to transplantation at the level of the Socialist Republic of Croatia. One might expect that such an undertaking would have been centrally coordinated, given that its success would carry national significance. However, the study was unable to determine whether there had been any direct instruction from Zagreb or Belgrade to proceed with such an operation. One possible argument suggesting some level of higher involvement is the reference in the published case report by Frančišković and his co-authors to the Federal Fund for Scientific Work. Yet, no corresponding documentation has been found, or it may be located in the archives in Belgrade. It appears more likely that the decision to undertake the procedure was made at lower institutional levels. Indeed, this raises the question of why Rijeka, rather than another centre, was chosen for such an attempt—especially given that there were criticisms from certain medical circles that the Rijeka team was insufficiently prepared. It seems that Frančišković closely followed international developments and effectively leveraged opportunities for his collaborators to gain direct experience with similar procedures in France. It should also

be recalled that tissue typing for the patient, Vlado Čakardić, was conducted in Lyon, further underscoring the importance of these international connections.

The consequences of the successful transplantation were reflected in the enhanced reputation of the Rijeka hospital and of Prof. Frančišković. Archival documents indicate that the Rijeka group exerted the greatest influence on legislative reforms concerning the status of transplant and dialysis patients, as well as on the legal regulation of organ transplantation from deceased donors.

In general terms, it may be concluded that the 1971 kidney transplantation in Rijeka represents an outstanding example in local history, one that brings together the city's rich medical heritage and demonstrates the importance of international relations in medicine—relations that operate beyond formal diplomacy and politics, instead unfolding through scientific channels.

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SAŽETAK

Rad analizira tijek i nasljeđe prve uspješne transplantacije bubrega u socijalističkoj Jugoslaviji, izvedene u Rijeci 30. siječnja 1971. pod vodstvom prof. Vinka Frančiškovića. Temelji se na kombinaciji sekundarne literature, novinskih izvora i ograničenih arhivskih dokumenata, čime se medicinski događaj promatra i iz historiografske perspektive. Poseban naglasak stavljen je na pripreme riječkoga medicinskog tima koje su uključivale međunarodnu suradnju, osobito s Francuskom. Sam zahvat, izveden transplantacijom bubrega s majke na sina, bio je uspješan, no praćen je intenzivnim medijskim interesom, čak i određenim stručnim skepticizmom. Analiza arhivskih dokumenata iz 1970-ih pokazuje da je ova transplantacija potaknula daljnji razvoj transplantacijske medicine, ali i otvorila pitanja organizacije zdravstvenog sustava, financiranja i statusa pacijenata na dijalizi.

***Ključne riječi**: transplantacija bubrega, Rijeka, 1971., međunarodna suradnja u medicini, Vinko Frančišković, povijest kirurgije, bolnica Necker*