

Complications After Cosmetic Surgery Tourism

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Abstract

Background: Cosmetic surgery tourism characterizes a phenomenon of people traveling abroad for aesthetic surgery treatment. Problems arise when patients return with complications or need of follow-up care.

Objectives: To investigate the complications of cosmetic surgery tourism treated at our hospital as well as to analyze arising costs for the health system.

Methods: Between 2010 and 2014, we retrospectively included all patients presenting with complications arising from cosmetic surgery abroad. We reviewed medical records for patients' characteristics including performed operations, complications, and treatment. Associated cost expenditure and Diagnose Related Groups (DRG)-related reimbursement were analyzed.

Results: In total 109 patients were identified. All patients were female with a mean age of 38.5 ± 11.3 years. Most procedures were performed in South America (43%) and Southeast (29.4%) or central Europe (24.8%), respectively. Favored procedures were breast augmentation (39.4%), abdominoplasty (11%), and breast reduction (7.3%). Median time between the initial procedure abroad and presentation was 15 days (interquartile range [IQR], 9) for early, 81.5 days (IQR, 69.5) for midterm, and 4.9 years (IQR, 9.4) for late complications. Main complications were infections (25.7%), wound breakdown (19.3%), and pain/discomfort (14.7%). The majority of patients (63.3%) were treated conservatively; 34.8% became inpatients with a mean hospital stay of 5.2 ± 3.8 days. Overall DRG-related reimbursement premiums approximately covered the total costs.

Conclusions: Despite warnings regarding associated risks, cosmetic surgery tourism has become increasingly popular. Efficient patients' referral to secondary/tertiary care centers with standardized evaluation and treatment can limit arising costs without imposing a too large burden on the social healthcare system.

Level of Evidence: 4

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Medical tourism in general characterizes a phenomenon of people traveling abroad to access health treatment - reaching from dental procedures, assisted reproductive technology, ophthalmologic and psychological care via cancer treatment, orthopedic and cardiac surgery, to organ and cellular transplantation and not least cosmetic surgery procedures.^{1,2} While some countries in South America have developed strong reputations for aesthetic surgery and dental care, countries from Far East have become famous for general surgery procedures with medical services at particularly affordable prices being as low as 10% compared to those in the United States.^{3,4} Above that, even

industrialized countries such as Switzerland, Belgium, Germany, or Canada attract well-off patients from abroad offering sophisticated care with modern technologies focusing on patients' preferences and satisfaction.¹ It is not surprising, that this rapidly growing trend captures attention

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in academic and popular media, which is underlined by a *Google* internet search for the term “medical tourism” resulting in more than 30 million hits (performed in December 2015). Although precise records of people seeking medical treatment abroad are lacking with an estimated high number of unknown cases, rough calculations account for about 6 million US Americans that claimed medical care overseas in 2010 - with the tendency to triple in 2017.⁵

Amongst the different types of medical tourism, cosmetic surgery procedures hold a special position and have proven to be particularly popular for different reasons. First, the phenomenon of cosmetic surgery tourism is largely price-driven as most of the requested procedures have to be paid out the patient’s own pocket - both in their home countries and abroad. Such cost-conscious patients mainly originating from highly industrialized countries are willing to accept certain inconveniences and insecurities in order to undergo aesthetic procedures at an attractively low price in less developed states.⁵⁻⁷ Travel agencies that specialize in whole package arrangements offering aesthetic procedures performed by well-trained physicians in an often-luxurious ambience mollify the patient’s doubts and qualms. First world service at third world cost is the calculus in the scope of increasing healthcare expenditure in rich world countries.⁶ Cosmetic surgery tourism is additionally fueled by the preservation of patients’ anonymity, shorter waiting lists, accessible online information, and the relative affordability of international airfares along with favorable economic exchange rates.⁸ Another factor contributing to this growing popularity of seeking procedures abroad is an increasing strive for consumerism where the patient can dictate requested surgical procedures.

Nonetheless, it remains to be questioned if travel agencies or private clinics abroad specializing in cosmetic surgery tourism can keep their glamorous promises. Whereas on-site complications might be directly handled by the surgeon/anesthesiologist in charge, problems arise when complications occur after the patient’s return in their home country. Even deaths of individuals traveling abroad for cosmetic and bariatric surgery have been reported in this context.⁹ In case of surgical failure or hospital negligence, it is often difficult for patients to receive adequate compensation for malpractice in many countries.¹⁰ As to that, initial savings might blur patients’ farsightedness.¹¹ Consequently, sufficient follow up care is one of the most challenging hurdles that cosmetic surgery tourism is facing today. Regularly reported complications are infections, wound dehiscence, pain/discomfort and aesthetic dissatisfaction.^{5,6,12,13}

Although cosmetic surgery tourism as a niche has become a stand-alone industry, little is known about clinical outcomes, complication rates, opportunity costs, and responsibility regarding treatment of complications and cost coverage. Any direct numbers regarding quality-control

or patient satisfaction are lacking for self-explanatory reasons. However, as the trend for cosmetic procedures abroad continues to grow, so does the need for an efficient management of resulting complications. Increasing numbers of individuals have presented to our department requesting treatment during the last 5 years. In this retrospective study, we set out to investigate these complications of cosmetic surgery tourism as well as to analyze cost effectiveness of treatment for complications at our center.

METHODS

Approval was obtained from the Ethics Committee of the University of Zurich (KEK-ZH-Nr. 2014-0585). We retrospectively included all patients presenting as emergency cases or as outpatients at our department between 2010 and 2014 with complications arising from cosmetic surgery abroad. Concerned medical records were reviewed for patients’ characteristics including performed operations, follow-up period, geographical area and surgical complications. Chart review was conducted in July 2015. Performed procedures abroad were grouped according to their type of surgery: breast surgery (augmentation, reduction, mastopexy, change of implants), body contouring (abdominoplasty, liposuction, thigh lift, brachioplasty), facial surgery (facelift, otoplasty, blepharoplasty, rhinoplasty), injections (botulinum toxin, fillers), and others (eg, hair transplantation, genital rejuvenation surgery). Follow-up period between the initial procedure abroad and presentation at our department was subdivided into early (≤ 30 days), midterm (30-180 days) and late (> 180 days) occurrence of complications.

Costs were defined as total direct costs of inpatient care, allocated to each case under the REKOLE (Bern, Switzerland) full cost accounting method.¹⁴ REKOLE is the Swiss national cost accounting system for hospitals. National legislation demanded comparability and transparency in hospital cost accounting, which is why REKOLE was introduced. It is a full cost accounting method with the hospital case being the cost unit, which means that all costs including overheads are allocated to the treated patients. Revenue was defined as the total earnings per case, taking into account the change of the reimbursement system from a largely per-diem based system to a Diagnose Related Groups (DRG)-based prospective payment system for discharges after January 2012. The case earnings were calculated by subtracting the case costs from the calculated case revenue. The accuracy of revenue-determining coding as well as cost data in Switzerland is continuously subject to external and independent audits.

Data were analysed using Statistical Package for Social Sciences (SPSS, Version 20 for Macintosh; Chicago, IL). Discrete values are expressed as counts (percentages) and continuous variables as means (standard deviation [SD])

or medians (interquartile range [IQR]) according to their distribution.

RESULTS

A total of 109 patients presenting with complications secondary to cosmetic procedures abroad were identified in the period between 2010 and 2014 (Figure 1). All patients were female with a mean age of 35.1 years (SD, 10.5) (range, 18-62 years) at procedure abroad, while mean age at presentation was 38.2 years (SD, 11.3) (range, 20-73 years). Overall median follow-up time between the initial procedure abroad and presentation at our department was 84 days (IQR, 616 days). Forty patients presented with early complications (≤ 30 days) with a median follow-up time of 15 days (IQR, 9 days) (Table 1). Ten of these “early complication” patients (25%) needed immediate revision surgery due to acute infection, implant exposure, wound breakdown, or hematoma. The remaining 30 patients (75%) were treated conservatively with antibiotics and/or regular wound care; eventually 4 of these patients (10%) had to undergo revision surgery subsequently as conservative treatment failed. Twenty-eight patients suffering from midterm complications (31-180 days) presented after 81.5 days (IQR, 69.5 days) (Table 1). This “midterm complication” group comprised 28 patients (26%) with 10 patients presenting with wound breakdown, 7 patients with pain/discomfort, 5 patients with delayed infection, and 2 patients who complained about the aesthetic result. The rate for immediate reoperation was as low as 7% (2 patients) in this group. Conservative treatment was predominant (71%), 6 patients had to be operated subsequently when conservative man-

agement failed. Late complications (> 180 days) were found in 41 patients with a median follow-up period of 2.96 years (IQR, 9.4 days) (Table 1). This “late complication” group with 41 patients (38%) included unsatisfying results in 5 patients, prolonged pain/discomfort in 8, implant rupture in 8, capsular contracture in 7, and infection mostly due to late seroma in another 4 patients. None of these patients had to be operated immediately. Elective surgical intervention was required in 18 patients.

Breast surgery was the most frequent procedure with 68 cases (62.4%), while 17 patients (15.6%) underwent body contouring procedures; facial surgery was performed in 5 patients (4.6%), while 14 patients (12.8%) underwent injections with botulinum toxin or fillers (Table 1, Figure 2). Main complications were infections (25.7%) followed by wound breakdown (19.3%), pain/discomfort (14.7%), implant rupture (8.3%), capsular contracture (6.4%), dissatisfaction with the aesthetic result (6.4%), and hematoma (5.5%) (Table 1, Figure 3). Most procedures were performed in South America (30.3%) and Southeast (29.4%) or Middle Europe (24.8%), respectively (Tables 2-4).

The majority of patients presented via our emergency department ($n = 68$, 62.4%), none of them in instable condition. All other patients referred themselves to our outpatient clinic ($n = 41$, 47.6%). Thirty-eight patients (34.8%) became inpatients with a mean hospital stay of 5.2 days (SD, 3.9 days). None of them required medical intensive care. Almost two-third of these patients ($n = 69$, 63.3%) were treated conservatively with administration of antibiotics ($n = 17$). Forty patients (36.7%) needed revision surgery, most of them due to infection ($n = 19$). Table 5 shows the numbers of patients according to the type of consultation (outpatient vs inpatient) and the type of treatment (conservative vs surgery).

Total cost expenditure reached SFr 530,000 (~US \$534,000, ~EUR 486,000) while (DRG-related) reimbursement was SFr 550,000 (~US \$554,000, ~EUR 505,000), resulting in a slight overall financial gain of SFr 20,000 (~US \$20,000, ~EUR 19,000) for the population of 109 patients. Inpatients caused significantly higher costs (SFr 10,000, US \$10,100, EUR 9200 per patient) than outpatients (SFr 3800, US \$3830, EUR 3490 per patient). Inpatients were profitable with mean gains of SFr 1287 (~US \$1300, ~EUR 1180) per patient, while outpatients (including partial inpatients) caused an average loss of SFr -415 (US \$418, EUR 381) per patient in our tertiary hospital setting (exchange rate per July 26, 2016: 1 SFr = 0.92 EUR = 1.01 USD).

DISCUSSION

According to an ISAPS-based (International Society of Aesthetic Plastic Surgery) article from 2011, highest percentages of cosmetic procedures worldwide are performed

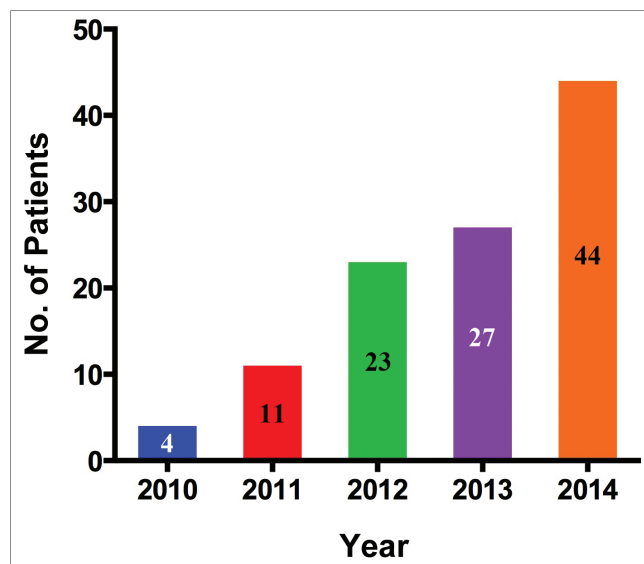


Figure 1. Number of patients with complications related to cosmetic surgery tourism per year.

Table 1. Procedures Performed and Complications According to their Temporal Occurrence

	Early (≤30 days)	Midterm (31-180 days)	Late (>180 days)	Total
Procedure				
Breast surgery	25	19	24	68 (62.4%)
Body contouring	9	5	3	17 (15.6%)
Injections	2	2	10	14 (12.8%)
Facial surgery	3	1	1	5 (4.6%)
Others	1	1	3	5 (4.6%)
Complication				
Infection	19	5	4	28 (25.7%)
Wound breakdown	8	10	3	21 (19.3%)
Pain/discomfort	1	7	8	16 (14.7%)
Implant rupture	1		8	9 (8.3%)
Dissatisfaction		2	5	7 (6.4%)
Capsular contracture			7	7 (6.4%)
Hematoma	5	1		6 (5.5%)
Others	6	3	6	15 (13.8%)

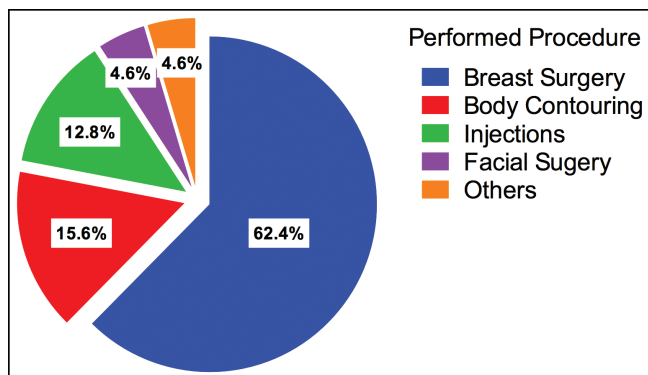


Figure 2. Percentage of performed procedures abroad.

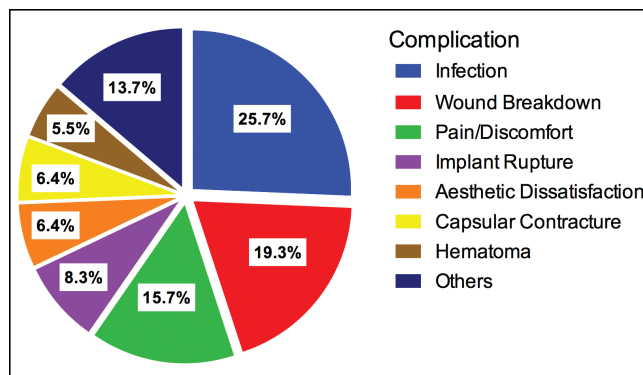


Figure 3. Percentage of complications related to cosmetic surgery tourism.

in Switzerland with 59 operations per 10,000 citizens. For comparison, highest total numbers of cosmetic procedures are reported for the United States, however accounting for only 35 cosmetic procedures per 10,000 citizens.¹⁵ Independently of these striking numbers, skyrocketing healthcare costs make people of industrialized countries gradually claim medical treatment abroad. Consequently, the willingness to undergo surgery abroad has gained an entirely new dimension making cosmetic surgery tourism a thriving industry. As complications are unavoidable, healthcare systems of patients' home countries have to face the consequences in return. Although absolute numbers of people traveling abroad for cosmetic surgery are lacking, we were able to observe this rapidly growing trend

for Switzerland, too (Figure 1): An increasing number of patients presented to our department with complications secondary to cosmetic surgery abroad between 2010 and 2014. Allowing for the fact that quality and safety of these procedures might have ameliorated during the last decade, the almost exponentially rising number of complications gives a rough idea of the extent of this phenomenon. This increase might even be underestimated as cosmetic surgery tourism is absolutely trending in Europe and even more so in Switzerland with the high price level. There is no official data available. Financial reasons are currently driving this trend and being a tertiary public hospital we are supposed to help for any medical issue within the Swiss healthcare system. The Division of Plastic Surgery

Table 2. Procedures Performed According to their Originating Subcontinent

	Breast surgery	Body contouring	Facial surgery	Injections	Others	Total
America						
South America	21	4	0	6	2	33 (30.3%)
North America	1	0	0	0	0	1 (0.9%)
Europe						
Middle Europe	21	3	2	1	0	27 (24.8%)
South Europe	3	0	0	0	0	3 (2.8%)
West Europe	1	0	0	1	1	3 (2.8%)
Asia						
Far East	2	0	0	1	1	4 (3.7%)
Middle East	0	1	0	1	0	2 (1.8%)
Africa						
North Africa	2	1	0	1	0	4 (3.7%)
Total	68 (62.4%)	17 (15.6%)	5 (4.6%)	14 (12.8%)	5 (4.6%)	

and Hand Surgery at the University Hospital Zurich provides up to 30 beds for inpatients and serves the population of Zurich with about 380,000 citizens and its cantonal area with a total population of 1.4 million citizens. However, further hospitals of Zurich and its adjacent area contribute to patients' healthcare. The annual report of 2015 revealed nearly 6000 consultations and 1650 procedures for plastic surgery reasons (including aesthetic surgery) at our division.¹⁶ Numbers on purely aesthetic operations make up for approximately 10%.

We found breast surgery (62%) along with body contouring (15%) and injections (13%) as the most frequently performed procedures, which is in line with previous studies conducted in Europe.^{6,12,13,17} Miyagi et al investigated the same issue for the United Kingdom (UK) presenting complications secondary to breast surgery in 74% and body contouring in 21%.⁶ Of note, the mean age in Miyagi et al's study (43.5 years; range, 30-60 years; survey period, 2007-2009) was remarkably higher in contrast to our finding (35.1 years; range, 18-62 years; survey period, 2010-2014). This might largely be related to the growing desire of younger patients for cosmetic surgery. We found wound infection (26%) as predominant complication after cosmetic surgery abroad, followed by wound breakdown (19%) and pain/discomfort (15%). This basically confirms the results of earlier studies, which were conducted in Great Britain and the United States.^{5,6,13} Interestingly, a recent study from the United States presented a series of patients with mycobacterial infections after cosmetic surgery in developing countries.¹⁸ The authors stated that the endemic nature of these bacteria combined with a low

domestic (in the United States) incidence of related infections might delay diagnosis and adequate treatment. In our study, two of our 28 infectious complications were related to mycobacteria and correct microbiological results were delayed by approximately four weeks in both cases. Thus consulting physicians should have a low threshold to consider atypical etiologies in such scenarios.

Notwithstanding, Miyagi et al as well as Jeevan et al reported complications due to poor cosmetic results in 37% and 26% respectively, which remarkably differs from our finding (6%).^{6,17} A possible reason for this difference might be the fact that Miyagi et al conducted their study in a tertiary referral Plastic Surgery practice and Jeevan et al received their data from a questionnaire, which was answered by 203 UK consultant plastic surgeons mainly belonging to the private sector. There may be a significant bias of complicated cases presenting in public hospitals with emergency units and plastic surgery private practices - the latter ones probably seeing more late complications and aesthetic dissatisfaction. Of note, pertinent literature does not provide data on complications resulting from local injections such as botulinum toxin or fillers. However, this type of complication was observed in 13% of our patients reflecting the growing sector of "minimal invasive rejuvenation." These quite affordable and quick procedures are meanwhile regularly offered as "to-go" interventions along the road or at exclusive hotels.

Overall median follow-up time between the initial procedure abroad and presentation at our department was 84 days (IQR 616 days). The large IQR of the overall follow up period was related to patients presenting several

Table 3. Country-Related Numbers of Performed Operations

America	
South America	33 (30.3%)
Brazil	16
Colombia	5
Dominican Republic	4
Venezuela	4
Ecuador	3
Peru	1
United States	1 (0.9%)
Europe	
Southeast Europe	32 (29.4%)
Turkey	14
Serbia	8
Bulgaria	2
Croatia	2
Macedonia	2
Romania	2
Slovenia	2
Middle Europe	27 (24.8%)
Germany	10
Czech Republic	9
Austria	3
Poland	3
Belgium	1
Hungary	1
South Europe	3 (2.8%)
Italy	2
Portugal	1
West Europe	3 (2.8%)
United Kingdom	2
France	1
Asia	
Far East	4 (3.7%)
Thailand	3
India	1
Middle East	2 (1.8%)
Emirates	1
Lebanon	1
Africa	
North Africa	4 (3.7%)
Morocco	2
Tunisia	2

months/years after the initial operation abroad (eg, in case of capsular contracture). These “outliers” diminish the meaningfulness of the overall median follow-up period in terms of a significant skewedness. Accordingly, we subdivided our cohort into three groups corresponding to their time-dependent occurrence of complications (early/acute, midterm, late complications) with more informative and statistically more reliable follow up medians. Early complications occurring within the first 30 days after operation include acute, possibly life-threatening complications such as infections, hematoma/bleeding or dehiscence potentially necessitating urgent surgical revision. With the end of this “early” period, regular wound healing should allegedly be completed and severe consequences become rather unlikely. The “midterm” group comprises complications that are directly related to the operation abroad, but do mostly not require urgent intervention. During this period scar formation is peaking and possibly leading to pain/discomfort, and delayed wound-healing disorders are to be expected. Additionally, patients usually start judging the cosmetic result after wound healing has terminated and swellings have vanished accounting for complaints due to poor aesthetic result. Patients also start doing sports and participate more in social activities, which may influence judgments and discomfort during this period. Eventually, the “late group” includes unsatisfying results, chronic problems like prolonged pain/discomfort, implant rupture, or capsular contracture. None of the “late group” patients had to be operated immediately. If conservative treatment fails or is impossible (eg, capsular contracture), elective surgery may be an option. Each group of the present study accounted for more or less one-third of the patients. Notwithstanding this fact, almost two-third of the patients presented via our emergency room, notably none of them in unstable condition. Initial consultation in the emergency room is associated with higher costs for the national health-care system and prolonged waiting time for the patients. Additionally, pressure on already overstretched emergency units should be avoided. Consequently, the provided categorization might help primary and secondary care services to refer patients either directly to the emergency room (early category) or re-schedule for an appointment in the outpatient clinic (midterm, late category). As to that, Supplementary Figure 1 provides a complementary outline aiming at cost and resource effective triage and treatment limitations of patients with complications secondary to cosmetic surgery abroad. Note, that boundaries between the categories might partly be fluent. Under these circumstances taking care of “early” complication cases after surgery abroad may financially be more attractive for public hospitals and teaching units than in the private setting of aesthetic plastic surgeons. Emergency availability, immediate diagnostic tools, bed and operating room capacity, as well as personnel resources may advocate for treatment of

Table 4. Subcontinent-Related Numbers of Complications

	Infection	Hematoma	Wound breakdown	Pain/discomfort	Implant rupture	Dissatisfaction	Capsular contracture	Others	Total
South America	9	1	7	2	4	1	2	7	33
South East Europe	6	3	8	4	1	4	0	6	32
Middle Europe	8	1	4	7	3	2	2	0	27
Far East	1	0	0	0	0	0	2	1	4
North Africa	2	0	1	1	0	0	0	0	4
South Europe	0	1	1	0	1	0	0	0	3
West Europe	1	0	0	1	0	0	1	0	3
Middle East	1	0	0	0	0	0	0	1	2
North America	0	0	0	1	0	0	0	0	1

Table 5. Number of Patients According to the Type of Consultation (Outpatient vs Inpatient) and the Type of Treatment (Conservative vs Surgery)

	Type of consultation		Type of treatment	
	Outpatient (65%)	Inpatient (35%)	Conservative (63%)	Operation (37%)
Procedure				
Breast surgery	44 (64.7%)	24 (35.3%)	44 (64.7%)	24 (35.3%)
Body contouring	12 (70.6%)	5 (29.4%)	11 (64.7%)	6 (35.3%)
Injections	7 (50%)	7 (50%)	7 (50%)	7 (50%)
Facial surgery	5 (100%)	-	4 (80%)	1 (20%)
Others	3 (60%)	2 (40%)	3 (60%)	2 (40%)
Complication				
Infection	7 (25%)	21 (75%)	9 (32.1%)	19 (77.9%)
Wound breakdown	19 (90.5%)	2 (9.8%)	19 (90.5%)	2 (9.53%)
Pain/discomfort	15 (93.8%)	1 (6.2%)	14 (87.5%)	2 (12.5%)
Implant rupture	4 (44.4%)	5 (56.6%)	4 (44.4%)	5 (55.6%)
Dissatisfaction	7 (100%)	-	6 (85.7%)	1 (14.3%)
Capsular contracture	3 (42.9%)	4 (57.1%)	3 (42.9%)	4 (57.1%)
Hematoma	5 (83.3%)	1 (16.7%)	5 (83.3%)	1 (16.7%)
Others	11 (73.3%)	4 (26.7%)	9 (60.0%)	6 (40%)

acute complications in secondary and tertiary care centers, while the mid- and long-term complications may be served equally well in the private sector or in specialized hospital outpatient clinics predominantly on patients own cost.

Of note, all patients of our study were female, which significantly differs from data provided by the American Society for Aesthetic Plastic Surgery with 10.3% of surgical and 9.4% of nonsurgical procedures are performed on males.¹⁹ This might be related to the fact that aesthetic

surgery in males in Europe is not as common as in the United States. To the best of our knowledge there is no data available on gender related cosmetic surgery tourism.

Healthcare in Switzerland is universal and is regulated by the Swiss Federal Law on Health Insurance. There are no free state-provided health services, but health insurance is compulsory for all persons residing in Switzerland. Health insurance covers the costs of medical treatment and hospitalization of the insured.

However, the insured person pays part of the treatment costs by means of an annual deductible (called “franchise”, ranging US \$184-1534) and by a charge of 10% of the costs. As to that, the Swiss national healthcare system takes care for complications resulting from surgical interventions regardless of whether the primary surgery was performed domestically or abroad. Excluded from this lawful obligation are purely aesthetic complaints. Though, even in these cases, an insurance inquiry can be made on an individual basis.

Switzerland has a propitious geographic location in the center of Europe enabling people to seek aesthetic surgery abroad within few hours - guaranteeing remarkably lower prices, shorter waiting lists, excellent care, and quality in a luxurious ambience and the possibility to combine holidays with cosmetic procedures. Our data reflect this assumption as almost 60% of the patients underwent beauty surgery in neighboring European countries. Within Europe, favored countries are Turkey, Germany, Czech Republic, and Serbia - probably offering the best combination of low prices, well-trained physicians, high standard care, informative and trustworthy internet presence, and none/reduced language barriers. Three earlier studies, conducted in the UK, consistently found the neighboring European countries (especially the Southeast of Europe) as primary destination for cosmetic surgery tourists.^{5,6,17} Outside Europe, despite long travel distances, South America (30%) has proven its popularity for cosmetic surgery tourism with Brazil (15%) as market leader. Attractive airfares and a not irrelevant percentage of South American (45,000, 0.5%), Spanish (85,000, 1%), and Portuguese (275,000, 3%) immigrants might explain this trend²⁰ for Switzerland.

In the age of DRG revenue management, analysis of cost effectiveness plays an increasingly important role. Our results indicate that the treatment of complications resulting from cosmetic surgery tourism can be handled cost-effectively. Considerable potential for savings lies in the referral of non-emergency cases to the outpatient clinic instead of the emergency room. Adequate comparable data are lacking in pertinent literature; merely Miyagi et al reported that remuneration provided by the Primary Care Trust (UK) to the hospital was less than 70% of the actual expenditure. To be mentioned, international comparisons of costs and reimbursement need to be adjusted to the relatively high cost and reimbursement level for medical care in Switzerland.²¹

Several international collaborative initiatives have faced the problems of cosmetic surgery tourism by establishing recognized contracts including measures for ensuring accountability if complications arise, appropriate hygiene standards and post-procedural care. In addition, the International Society of Aesthetic and Plastic Surgery (ISAPS) and the American Society of Aesthetic and Plastic Surgeons (ASAPS) have issued guidance for patients on

the risks of cosmetic tourism and information they should seek prior to any procedure abroad.²² The latter includes the ISAPS Patient Safety Diamond, which emphasizes four facets that the patient should establish. These include details of the operation (including indications, likelihood of success, and associated risks), qualifications and track record of the surgeon, quality and resources of the healthcare facility, and the appropriateness for the individual patient to undergo the specified procedure.

Although this is the first survey addressing cosmetic surgery complications in Switzerland, our study is limited by the fact that a national database on absolute numbers of Swiss people seeking cosmetic procedures abroad is lacking. Consequently, relative numbers serving as “quality feature” for cosmetic procedures abroad cannot be calculated. Likewise, numbers from neighboring hospitals treating complications secondary to cosmetic surgery tourism have not been included in our study for ethical reasons (inter-cantonal ethical approval and individual informed consent from all patients is required). Moreover, patient numbers seeking cosmetic procedures abroad might be lower for other countries so that the results presented here may not be directly transferred to other health systems and societies. As the price level in Switzerland is relatively high in comparison to adjacent countries in Europe and the size of the country is limited, patients are motivated to seek cosmetic procedures at lower cost within reasonable travel time. Future studies should also include data on patients’ ethnicity and descent.

CONCLUSIONS

Cosmetic surgery tourism has become a stand-alone industry with ongoing trend to expand. Overall complication rates as markers for the quality of surgery performed abroad remain unknown, as data on the total number of these procedures is lacking. Following efficient patients’ referral with subsequent professional evaluation and treatment in qualified plastic surgery units, immediate as well as later occurring complications secondary to cosmetic surgery abroad can be treated effectively at reasonable costs without imposing a too high burden on the social healthcare system. The majority of complications can be treated conservatively and in an ambulatory setting.

Supplementary Material

This article contains supplementary material located online at www.aestheticsurgeryjournal.com.

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