

**Facial trauma due to suicide attempt and its implications in a patient with psychological disorder: Brief Report**

**Trauma facial devida tentativa de suicídio e suas implicações em paciente com transtorno psicológico: Relato de Caso**

**Trauma facial debido a un intento de suicidio y sus implicaciones en un paciente con desorden psicológico: Informe de caso**

Received: 11/09/2020 | Reviewed: 11/12/2020 | Accept: 11/16/2020 | Published: 11/21/2020

**William Phillip Pereira da Silva**

ORCID: <https://orcid.org/0000-0003-4172-7217>

São Paulo State University, Brazil

E-mail: [william\\_phillip@hotmail.com](mailto:william_phillip@hotmail.com)

**Bruno Coelho Mendes**

ORCID: <https://orcid.org/0000-0001-7896-8909>

São Paulo State University, Brazil

E-mail: [brunocoelho.mnds@gmail.com](mailto:brunocoelho.mnds@gmail.com)

**Kátia Gonçalves de Jesus**

ORCID: <https://orcid.org/0000-0002-3434-419X>

São Paulo State University, Brazil

E-mail: [katiagjesus@gmail.com](mailto:katiagjesus@gmail.com)

**Barbara Ribeiro Rios**

ORCID: <https://orcid.org/0000-0002-5389-5536>

São Paulo State University, Brazil

E-mail: [barbararios@outlook.com](mailto:barbararios@outlook.com)

**Cléa Adas Saliba Garbin**

ORCID: <https://orcid.org/0000-0001-5069-8812>

São Paulo State University, Brazil

E-mail: [clea.saliba-garbin@unesp.br](mailto:clea.saliba-garbin@unesp.br)

**Idelmo Rangel Garcia Junior**

ORCID: <https://orcid.org/0000-0001-8892-781X>

São Paulo State University, Brazil

E-mail: [irgcirurgia@gmail.com](mailto:irgcirurgia@gmail.com)

**Francisley Ávila Souza**

ORCID: <https://orcid.org/0000-0002-1427-071X>

São Paulo State University, Brazil

E-mail: [francisley.avila@unesp.br](mailto:francisley.avila@unesp.br)

**Leonardo Perez Faverani**

ORCID: <https://orcid.org/0000-0003-2249-3048>

São Paulo State University, Brazil

E-mail: [leonardo.faverani@unesp.br](mailto:leonardo.faverani@unesp.br)

### **Abstract**

**Background:** Suicide accounts for a significant share of the world's deaths and is the target of a public health problem. Suicide is unique among the causes of death due to illness, due to the fact that it is a situation in which the individual reaches the extreme of his behavior. The causes are complex and multifaceted and are part of the underlying strategies, stressful life events and personality factors, such as coping strategies adopted in their daily lives. **Methods:** The objective of this work was to report a clinical case of multiple facial fractures due to a suicide attempt, reporting the multidisciplinary conduct in surgical, psychological and emotional treatment in psychosocial rehabilitation of the patient. **Conclusion:** Multidisciplinary interaction for the treatment of the patient, with special attention to the nursing team is in contact with the patient, allowing the registration and updated monitoring of their reactions.

**Keywords:** Attempted suicide; Maxillofacial injuries; Managed care programs.

### **Resumo**

**Fundamento:** O suicídio representa uma importante parcela das causas de morte no mundo, sendo considerado um sério problema de saúde pública. O suicídio é único entre as causas de morte por doença, devido ao fato de tratar-se de uma situação na qual o indivíduo atinge o ponto extremo de seu comportamento. Suas causas são complexas e multifacetadas e incluem doenças mentais subjacentes, eventos de vida estressantes e fatores de personalidade, como as estratégias de enfrentamento adotadas em seu cotidiano. **Métodos:** O objetivo deste trabalho foi relatar um caso clínico de múltiplas fraturas faciais devido a uma tentativa de suicídio, relatando a conduta multidisciplinar frente ao tratamento cirúrgico, psicológico e emocional na reabilitação psicossocial do paciente. **Conclusão:** A interação multidisciplinar foi fundamental para o êxito do tratamento, com participação especial da equipe de enfermagem

a qual está em constante contato com o paciente, permitindo o registro e acompanhamento atualizado de suas reações.

**Palavras-chave:** Tentativa de suicídio; Trauma facial; Atendimento multidisciplinar.

## **Resumen**

**Antecedentes:** El suicidio representa una parte importante de las causas de muerte en el mundo y se considera un grave problema de salud pública. El suicidio es único entre las causas de muerte por enfermedad porque es una situación en la que el individuo alcanza el punto extremo de su comportamiento. Sus causas son complejas y polifacéticas e incluyen enfermedades mentales subyacentes, acontecimientos estresantes de la vida y factores de personalidad como las estrategias de afrontamiento adoptadas en su vida cotidiana. **Métodos:** El propósito de este estudio fue reportar un caso clínico de fracturas faciales múltiples debidas a un intento de suicidio, informando del enfoque multidisciplinario del tratamiento quirúrgico, psicológico y emocional en la rehabilitación psicosocial del paciente. **Conclusión:** La interacción multidisciplinaria fue fundamental para el éxito del tratamiento, con una participación especial del personal de enfermería, que está en contacto constante con el paciente, lo que permite un registro y seguimiento actualizado de sus reacciones.

**Palabras clave:** Intentos de suicidio; Trauma facial; Atención multidisciplinaria.

## **1. Introduction**

Suicide represents a relevant portion of the world's causes of death and is considered a serious public health problem (Hoffman & Islam, 2013). According to the World Health Organization, the annual suicide death rate in the world is 15 per 100,000 people in men and 8 per 100,000 in women (Suicide, 2014). In absolute numbers, this means over 800,000 suicide deaths each year (Sinyor, Tse, & Pirkis, 2017).

Centers for Disease Controls and Prevention of United States defines acts of fatal and nonfatal suicidal behavior as part of a series of violent behaviors that constitute self-directed violence (Crosby, Ortega, & Melanson, 2011). In most suicide attempts, victims experience psychiatric disorders at the time of death, so these events are often related to an individual's impulsive and self-destructive behavior. Thus, it is noted that their actions are often the result of their impaired judgment, outbursts of anger or violence and misunderstanding the consequences of their conduct (Hoffman & Islam, 2013).

Suicide is unique among the causes of death due to illness, because it is a situation in which the individual reaches the extreme point of their behavior (Sinyor et al., 2017). Its causes are complex and multifaceted and include underlying mental illnesses, stressful life events and personality factors, such as coping strategies adopted in daily life (Turecki & Brent, 2016).

Several risk factors for suicide, both socially and individually, have been studied to improve understanding of this phenomenon. These include population-level factors such as social fragmentation, economic crises, and media influence; distal factors at the individual level, such as family history, early life adversity, and personality traits; and proximal factors at the individual level, such as episodes of depression, psychosis, substance poisoning, and stressful daily events (Turecki & Brent, 2016).

Choosing the suicide method involves a number of factors, such as personality and sociodemographic characteristics. Although this is not a fully elucidated subject, it is well known that the influence of the media and the ease of access to websites that provide detailed information on possible methods influence the nature of the acts (Glynn, 2010). The type of method adopted directly influences the degree of lethality of the suicide attempt (Hadjizacharia et al., 2010). Among women there is a tendency to use less violent methods such as drug or carbon monoxide poisoning, while men often use more violent methods such as firearms, hanging or jumping of high places (Hadjizacharia et al., 2010).

Failure to attempt suicide can cause severe harm to the individual, including aesthetic and functional sequelae, posing a major challenge for the healthcare team involved in its treatment. It should be noted that in addition to effective surgical care, the interaction of multidisciplinary teams to rehabilitate the individual's psychosocial aspect after the traumatic event is extremely important, as it is known that untreated emotional and behavioral diseases, including depression and behavioral disorders, contribute to for treatment failure (Glynn, 2010; Hoffman & Islam, 2013; Smeele & Van der Feltz-Cornelis, 1995).

This report shows a clinical case of multiple facial fractures due to a suicide attempt, reporting the multidisciplinary approach to surgical, psychological and emotional treatment in the patient's psychosocial rehabilitation.

## **2. Methods**

It is a retrospective, descriptive and observational study in the format of a Clinical Case Report of a patient's follow-up during treatment. The epidemiological data, history of

the disease, were collected through the physical and electronic records, after the authorization of the patient through the signature of the Term of Free and Informed Consent (TFIC), following the precepts of the publication without the identification of the patient (LÜDKE, 2013; Pereira, Shitsuka, Parreira, & Shitsuka, 2018).

### **3. Case Report**

A 47-year-old male patient was referred to the Oral and Maxillofacial Surgery team of the Santa Casa, Aracatuba, SP, Brazil, due to multiple facial fractures. According to information provided by the rescue service, the patient was involved in an intentional car accident, driving his vehicle at high speed toward a ravine. Clinical examination showed severe swelling in the middle third of face, with blunt cut injury in the left supraorbital region. Computed Tomography showed a non-classic Le Fort II fracture and anterior wall fracture of the frontal bone. Surgical treatment was performed to reduce the zygomatic maxillary complex and bilateral orbital fractures, choosing conservative treatment of the glabella and frontal fractures.

Through information provided by a family member, it was found that the patient presented untreated depressive conditions prior to the suicide attempt. After surgical treatment, the patient's atypical behavior was noted by surgery and nursing teams, with frequent symptoms of crying and silence. It was also found that throughout the hospitalization time, friends or relatives of the patient were not present. The record of these observations was used as basis for requesting psychological follow-up of the patient. He presented improvement of his postoperative clinical condition and, after psychological evaluation, was discharged from the hospital, with outpatient follow-up and referral for psychological treatment. The clinical follow up by the surgical team occurred at 7, 15, 30, 60 and 120 days postoperatively, and was always approached in relation to psychological treatment, which was performed without the need for complementary drug therapy.

As a result of the defined treatment plan, a significant improvement in emotional and psychological state of the patient was noted, standing out that it continues to be monitored periodically with the multiprofessional team.

#### 4. Discussion

The methods employed for attempting suicide vary according to age, gender and social conditions. Hadjizacharia et al. (Hadjizacharia et al., 2010) report that males are responsible for most cases, with preference for jumping from high places and use of firearms. A smaller portion makes use of motor vehicles because it is a variable directly influenced by the age of the subject.

In the present case, the patient was a male, between the 4th and 5th decade of life, who made a suicide attempt using a motor vehicle. Studies on suicide attempts using this method are scarce in the literature, because as mentioned earlier, reports of attempts by firearm are more frequent (Alper, Totan, Cankayali, & Songur, 1998; Anestis, Khazem, & Anestis, 2017; Haug, 1998). It should be noted that access to firearms in Brazil is restricted by law, thus reducing the frequency of such occurrences when compared to other countries with easy access to these products, such as United States (Anestis et al., 2017).

Investigating the individual's mental health before the attack, through the evaluation of signs, symptoms and reports of the individual's family members is fundamental to improve the quality of treatment and the patient's prognosis (Hoffman & Islam, 2013). Although its role is not fully understood, it is known that the presence of psychopathology is the main risk factor for suicide. Most studies on the association between psychiatric disorders and suicide focus on clinical psychiatric disorder while few focus on assessing the role of personality disorders (Bjorkenstam, Ekselius, Berlin, Gerdin, & Bjorkenstam, 2016).

Information found in the literature regarding special or palliative care after trauma in patients with facial sequelae is scarce, as this situation is often overlooked by surgical teams (Eastman & Le, 2013). Due to the etiology of trauma, the beginning of psychological preoperative follow-up is recommended in patients coming from suicide attempts. Moreover, there is a need for adequate training of the surgery and nursing teams, since exposure to this kind of case can trigger strong emotions, reactions of anger, sarcasm, neglect or aversion to the patient's destructive act, known phenomenon in psychoanalytic theory as countertransference, which can directly or indirectly influence the patient's physical and psychological treatment (Smeele & Van der Feltz-Cornelis, 1995). In this context, the fact that many institutions and hospitals do not have a 24-hour psychiatry or psychology service, especially in least developed and developing countries, makes it difficult to make diagnoses and develop treatment plans simultaneously. surgical procedure (Hoffman & Islam, 2013). Post-trauma management through a multiprofessional team is fundamental for patient

rehabilitation, as studies show that individuals who survived after a serious suicide attempt may have a satisfactory recovery without relapses (Glynn, 2010; Hadjizacharia et al., 2010). Collaborative care as a best practice for reducing suicide risk describes a model in which a nurse, social worker, or other adequately trained team gets information about suicide risk through screening, which facilitates an initial treatment and follow-up plan. Consultations can then be scheduled with a mental health professional such as a psychiatrist who acts as a consultant for primary care teams. The strength of this stepped care approach lies in maximizing the effectiveness of collaborative care, with the aim of enhancing the cost-effectiveness of actions by starting with low-intensity interventions that can progress, depending on each situation, to more intensive interventions (Grant & Lusk, 2015).

## 5. Conclusion

Despite the limitations in our study, we can observe the importance in multidisciplinary interaction, which was fundamental for the success of the treatment. There is a need for future studies, which help patients and guide multidisciplinary teams. Mainly the interaction with the nursing team, which is in constant contact with the patient, allowing the registration and updated monitoring of their reactions.

## References

- Alper, M., Totan, S., Cankayali, R., & Songur, E. (1998). Gunshot wounds of the face in attempted suicide patients. *J Oral Maxillofac Surg*, 56(8), 930-933; discussion 933-934.
- Anestis, M. D., Khazem, L. R., & Anestis, J. C. (2017). Differentiating suicide decedents who died using firearms from those who died using other methods. *Psychiatry Res*, 252, 23-28. doi:10.1016/j.psychres.2017.02.048
- Bjorkenstam, C., Ekselius, L., Berlin, M., Gerdin, B., & Bjorkenstam, E. (2016). Suicide risk and suicide method in patients with personality disorders. *J Psychiatr Res*, 83, 29-36. doi:10.1016/j.jpsychires.2016.08.008
- Crosby, A., Ortega, L., & Melanson, C. (2011). Self-directed violence surveillance; uniform definitions and recommended data elements.

Eastman, P., & Le, B. (2013). Palliative care after attempted suicide in the absence of premorbid terminal disease: a case series and review of the literature. *J Pain Symptom Manage*, 45(2), 305-309. doi:10.1016/j.jpainsymman.2012.01.008

Glynn, S. M. (2010). The psychosocial characteristics and needs of patients presenting with orofacial injury. *Oral Maxillofac Surg Clin North Am*, 22(2), 209-215. doi:10.1016/j.coms.2010.01.003

Grant, C. L., & Lusk, J. L. (2015). A multidisciplinary approach to therapeutic risk management of the suicidal patient. *Journal of multidisciplinary healthcare*, 8, 291.

Hadjizacharia, P., Brown, C. V., Teixeira, P. G., Chan, L. S., Yang, K., Salim, A., Demetriades, D. (2010). Traumatic suicide attempts at a level I trauma center. *J Emerg Med*, 39(4), 411-418. doi:10.1016/j.jemermed.2008.04.031

Haug, R. H. (1998). Gunshot wounds of the face in attempted suicide patients. *Journal of Oral and Maxillofacial Surgery*, 56(8), 933-934. doi:10.1016/s0278-2391(98)90653-x

Hoffman, G. R., & Islam, S. (2013). Facial trauma patients with a preexisting psychiatric illness: a 5-year study. *Oral Surg Oral Med Oral Pathol Oral Radiol*, 116(5), e368-374. doi:10.1016/j.oooo.2012.01.043

Lüdke, M. A. (2013). MEDA de. *Pesquisa em educação: abordagens qualitativas*. São Paulo: EPU.

Pereira, A., Shitsuka, D., Parreira, F., & Shitsuka, R. (2018). *Metodologia da pesquisa científica.[e-book]*. Santa Maria. Ed.

Sinyor, M., Tse, R., & Pirkis, J. (2017). Global trends in suicide epidemiology. *Current opinion in psychiatry*, 30(1), 1-6.

Smeele, L., & Van der Feltz-Cornelis, C. M. (1995). Professional attitudes to requests for secondary facial reconstruction in patients who have attempted suicide. *British Journal of Oral and Maxillofacial Surgery*, 33(4), 228-230.

Suicide, W. P. (2014). A global imperative. *World Health Organization*.

Turecki, G., & Brent, D. A. (2016). Suicide and suicidal behaviour. *The Lancet*, 387(10024), 1227-1239.

### **Porcentagem de contribuição de cada autor no manuscrito**

William Phillip Pereira da Silva - 20%

Bruno Coelho Mendes – 15%

Katia Gonçalves de Jesus – 15%

Barbara Ribeiro Rios – 10%

Cléa Adas Saliba Garbin – 10%

Idelmo Rangel Garcia Junior – 10%

Francisley Ávila Souza – 10%

Leonardo Perez Faverani – 10%