HISTORY OF MEDICINE AND PHARMACY

Gheorghe Marinescu's studies on the influence of mescaline on artistic creativity

Irina Dora Magurean[1], Vlaicu Sandor[2], Dan L. Dumitrascu[3]

1) Photo-Video Department, University of Arts and Design, Cluj-Napoca, Romania

2) Department of Pharmacology, Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania

3) 2nd Department of Internal Medicine, Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania

Abstract

Background and aim. The artists of the avant-garde experienced numerous psychotropic drugs in order to stimulate their creativity. Between the two world wars, physicians, especially neurologists and psychiatrists, performed several studies on visual artists. The aim of this paper is to present a French medical journal, where the famous Romanian neurologist Gheorghe Marinescu published some of his studies on the effect of mescaline on two professional painters.

Methods. An anniversary issue of the French journal La Presse Médicale, including the work of Gheorghe Marinescu on mescaline and its influence on color vision is described. The publication belongs to the authors' private collection. The pharmacological effects of mescaline on visual sensitivity and some historical medical attempts to assess this effect are also included.

Results. Mescaline was administered by Gheorghe Marinescu to two visual artists who were asked to describe their sensations and cognitions under the effect of this substance. Their sensations and feelings were recorded. The paintings created by the artists are reproduced. They look like surrealistic and abstract art.

Conclusions. The famous Romanian neurologist Gheorghe Marinescu published in the French journal La Presse Médicale an interesting report of the visual effects of mescaline in two professional painters. This paper is important for the history of medicine and of the avant-gardist fine arts.

Keywords: art, Gheorghe Marinescu, history of medicine, mescaline, narcotics, painting

Introduction

The role of psychotropic substances in the elaboration of artistic creative expression was extensively investigated in the period between World War I and World War II [1]. One of the most largely studied drugs used to stimulate sensorial reactions was mescaline [1,2]. This is a reputed hallucinogenic substance of herbal origin from Latin American plants. Mescaline has effects on visual perceptions, therefore as early as a hundred years ago neurologists studied its effect on color vision and color hallucinations. One of the pioneers of the studies of mescaline on visual perception was the Romanian neurologist Gheorghe Marinescu (1863-1938). He was famous for his contribution to the progress of neurology and to the education of physicians in neurology; he also created some of the first medical movies in the world [3]. He is represented in figure 1.

The aim of this paper is to present a French medical journal where Gheorghe Marinescu published his experiments on the effects of Mescaline on the creativity of visual artists. Thus, we will lay emphasis on the presentation of the medical journal and its illustrations, as the experiments are known by historians of art [1,4]. To our knowledge, this information is first time presented in an English language biomedical journal.

DOI: 10.15386/mpr-2901

Manuscript received: 05.06.2025
Received in revised form: 22.07.2025
Accepted: 28.07.2025

Address for correspondence:
Irina Dora Magurean
irina.dora@gmail.com

Figure 1. Silver coin in observation of the 150th Anniversary of Gheorghe Marinescu's birth (reverse side) (private collection).

The journal accommodating Marinescu's study

By chance, we detected in the French journal La Presse Médicale, issue 92 from 18 November 1933, by Masson Publisher, Paris, a special issue dedicated to the 40th anniversary of the journal (Figure 2) a paper by Gheorghe Marinescu entitled: G. Marinesco: Visions colorées produites par la mescaline (Coloured visions produced by mescaline) pages 1864-1866. Figure 2 displays the cover of this anniversary issue. Many Romanian names with letter "u" at the end were written in French with "o" at that time.

Figure 2. The cover of the issue including Marinescu's contribution (private collection).

La Presse Médicale was a prestigious medical journal, where famous authors were publishing their works at that time. For instance, in this commemorative issue, beside Marinescu, we find important French authors like Roussy, Sergent, Pasteur Vallery-Radot, Leriche et Fontaine, Lutembacher, Mondor, a true gallery of personalities of the medical sciences of the time.

In the opening of this journal issue, H. Roger, the dean of the medical school, congratulates the editors of the journal for its longevity and quality [5]. Since 1983 the journal is published by Elsevier and now it is an important journal for French doctors, being published only online in English.

The experiment reported by Marinescu in La Presse Médicale

Professor Marinescu and his team studied the effect of mescaline on two painters. Additional stimulation was produced by noises and music (by composers Bach, Glinka, etc.).

The first subject was a famous avant-gardist Romanian painter, Corneliu Mihăilescu, spelled more frequently Michăilescu. Mihăilescu (1887-1965) was contacted by Marinescu in the 1930s and invited to participate in experiments with mescaline which the professor Marinescu presented to the Romanian Academy [6,7].

In this study, the painter, 45 years old, received 33 ctg mescaline sulfate (produced by Boehringer and Sons, Mannheim) divided into four doses injected within 80 minutes. The neurologists noted the reactions of the painter: hypotension, coenesthesia, hypersalivation, light spots, dizziness, hallucinations. Two hours after the first administration, the painter had colored visions. These were enhanced by the music he listened to. In continuation he presented abnormal movements. He also observed dysmorphism of the investigators, of the type of hallucinations. He was asked to paint his visions (Figure 3 and 4).

Figure 3. Painting by Mihăilescu under the influence of mescaline.

Figure 4. Painting by Mihăilescu under the influence of mescaline.

In figure 5, the image of a fallen person representing the effect of the toxic administered on the body, is depicted.

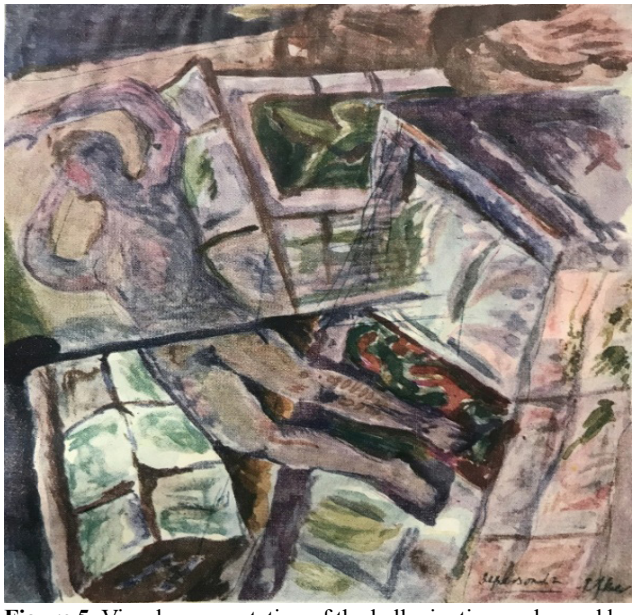

Figure 5. Visual representation of the hallucinations enhanced by music in the first subject (Mihăilescu).

After three hours, the effect of mescaline had vanished.

The other painter is described only as Mold… It is suspected that the true name was Paul Molda. We checked the more common Romanian names Moldovan or Moldoveanu on the list of exhibiting painters in Romania of that time. However, we were not able to identify any listed artist with such names on the list of artists exhibiting in the years 1920-1930s in Bucharest at the Official Salon, or with the group Artistic Youth. Paul Molda (1884-1955) with true name Paul Popescu, was a painter interested in psychedelic experiments, although his work belongs to the traditional style.

The second subject received 0.25 g mescaline subcutaneously. Bradycardia was noted. As no major effect was observed, he received a new dose after 30 min. Euphoria is installed and after one hour the artist described colored vision. He was subjected to music listening, which evoked new colored images. After two and three hours the subject presented trismus, anger, hallucinations. The effects lasted up to four and a half hours. In the figures 6 and 7 we describe the art works created by the second painter under the influence of mescaline.

Figure 6. Work by the painter Mold… under the influence of mescaline.

We recognize here the style of several surrealist and expressionist painters of the epoch. The colors of the paintings represent the visual sensations during the experiment.

Figure 7. Another work by the second subject, with religious topic.

Discussion

Mescaline is a strong psychotropic substance which can intensify meta-images and increase the color perception, better enhanced by other stimuli, such as auditive [8].

Nowadays mescaline has an impact similar to other psychedelics like LSD and psilocybin, but with unique variations in how colors and patterns are perceived. However, mescaline is classified as a Schedule I substance, meaning it is illegal in many countries due to its potential risks and lack of recognized medical use [9,10].

Before the experiments of Marinescu that we present here, this drug had been used for thousands of years, with evidence dating back to 6000 years ago in Mesoamerica. Together with the medical progress of the 20th Century, mescaline was increasingly used in experiences by neurologists and psychiatrists. The British writer Aldous Huxley reported his own experience with mescaline in his book: "The Doors of Perception", where he coined the name "psychedelic". The experiments were performed according to the ethical conditions of those days in two professional painters.

Nowadays there are attempts to look for the potential of mescaline in psychiatric therapy, i.e. in depression and in PTSD. Mescaline has a strong interaction with neuromodulators like serotonin and is able to promote neuroplasticity, acting much faster than typical antidepressants [11,12]. New hopes will be given by the advent of artificial intelligence [13].

An important aspect that should be revealed is the pioneer work of Marinescu on synesthesia. Indeed, later studies have shown that synesthetic experiences are evoked by the representation of the inducing stimuli [14-16], just as Marinescu has shown with the association of musical stimuli to the mescaline which produced vision alteration. More recent studies have proved the ability of chemical substances to provoke synesthetic perceptions [17,18]. Therefore, we consider the valuable experiments from Marinescu published in France as a barrier breaking studies.

Finally, the role of mescaline and of similar psychotropic drugs with respect to the concept of psychedelic therapy should be discussed. Indeed, psychedelic means a serotonergic hallucinogen [19]. The role of psychedelics in the history of the culture is very important, as they are able to change the normal perception, mood and cognitions. As very powerful psychoactive compounds, the psychedelic drugs are now considered in psychiatric therapy. Their hallucinogenic effects have to be checked also from the legal point of view. Nowadays experiments such as those presented here would have been banned by any ethics committee. Moreover, Marinescu studies preceded the studies by Guttman and Maclay in 1936, who used a similar protocol and obtained art works from different subjects [20]. These authors observed, however, that not everybody may transform their halucinations into artistic expression.

The here presented paper of Marinescu was not the only one submitted by him to La Presse Médicale. One month before, in the September issue of the same journal, Marinescu published another paper [21]. This has a more general scope: studies on mescaline. It shows that in that time, the period of surrealism and artistic and literary experiments, scientists were also interested in influencing vision and mood by psychotropic drugs.

We do not know where the original paintings illustrated in this issue are. We supposed that they were kept in the archives of Professor Marinescu, but we do not know if they are still preserved.

Conclusions

This paper presents a previously ignored special commemorative issue of the French medical journal La Presse Médicale from November 1933 including the study of the famous Romanian neurologist Gheorghe Marinescu on the effect of mescaline on colour vision in professional painters, illustrated by paintings of the subjects.

References

1. Oisteanu A. [Narcotics in Romanian culture], 4th Edition, Iasi: Polirom, 2019, p. 427-430. Romanian.
2. Hartman AM, Hollister LE. Effect of mescaline, lysergic acid diethylamide and psilocybin on color perception. Psychopharmacologia. 1963;20(4):441-451.
3. *** Societatea Română de Neurologie, Psihiatrie și Endocrinologie, Volume jubiliaire en l'honneur du professeur G. Marinesco: travaux originaux, de ses collègues, ses amis et ses élèves, Ed. Marvan, 1933. Romanian. French
4. Marinescu D. Corneliu Mihăiescu›s Paintings and the Oniric Experience of Mescaline (1929–1931), Astra Sabesiensis. 2015;1:167-182
5. Roger H. [Forty years, happy history of a journal] La Presse Médicale. 1933;40, 82:1793-1798. French.
6. Pintilie A. [The eye in the ear], Bucharest: Editura Meridiane, 2000. Romanian
7. Oprea P. Corneliu Mihailescu. Bucharest: Editura Meridiane, 1972. Romanian
8. BiologyInsights. Mescaline Side Effects: Potential Physical and Emotional Risks. Apr 29, 2025. Available from: https://biologyinsights.com/mescaline-side-effects-potential-physical-and-emotional-risks/ Published
9. Vamvakopoulou IA, Narine KAD, Campbell I, Dyck JRB, Nutt DJ. Mescaline: The forgotten psychedelic. Neuropharmacology. 2023;222:109294.
10. Ley L, Holze F, Arikci D, Becker AM, Straumann I, Klaiber A, et al. Comparative acute effects of mescaline, lysergic acid diethylamide, and psilocybin in a randomized, double-blind, placebo-controlled cross-over study in healthy participants. Neuropsychopharmacology. 2023;48:1659-1667.
11. Belouin SJ, Henningfield JE. Psychedelics: Where we are

now, why we got here, what we must do. Neuropharmacology. 2018;142:7-19.

12. Agin-Liebes G, Haas TF, Lancelotta R, Uthaug MV, Ramaekers JG, Davis AK. Naturalistic Use of Mescaline Is Associated with Self-Reported Psychiatric Improvements and Enduring Positive Life Changes. ACS Pharmacol Transl Sci. 2021;4:543-552.
13. Magurean ID, Brata AM, Ismaiel A, Barsan M, Czako Z, Pop C, et al. Artificial Intelligence as a Substitute for Human Creativity. J Research Philosophy History 2024, 7:7.
14. Rothen N, Meier B. Acquiring synaesthesia: insights from training studies. Front Hum Neurosci. 2014;8:109.
15. Kusnir F, Thut G. Formation of automatic letter-colour associations in non-synaesthetes through likelihood manipulation of letter-colour pairings. Neuropsychologia. 2012;50:3641-3652.
16. Lalwani P, Brang D. Stochastic resonance model of synaesthesia. Philos Trans R Soc Lond B Biol Sci. 2019;374:20190029.
17. Luke DP, Lungu L, Friday R, Terhune DB. The chemical induction of synaesthesia. Hum Psychopharmacol. 2022;37:e2832.
18. Luke DP, Terhune DB. The induction of synaesthesia with chemical agents: a systematic review. Front Psychol. 2013;4:753.
19. Nichols DE. Psychedelics. Pharmacol Rev. 2016;68:264-355.
20. Jay M. Mescaline. A Global History of the First Psychedelic, Yale University Press, 2019
21. Marinescu G. Recherche sur l'action de la mescaline, La Presse Médicale. 1933;74, 16:1433–1437. French