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Massage in the past, today and challenges for the future

A fast development of civilisation, including rapid pace of life, are the causes of not always positive changes in both the environment and the human body. For ages we have failed to develop efficient defensive mechanisms against the effects of the air, water and food pollution. Exhausting the auto-regulation resources as a result of improper nutrition, overuse of medicines or long-lasting stress lead to depleting possibilities of compensation, organism degradation and, eventually, to civilisation-related diseases. In order to retain health in the state of full physical and psychological prosperity, we have to take care of it in a proper manner. Beside pharmacotherapy, more and more people take the benefit of, among others, dynamically developing biological renovation centres, showing positive attitude towards the natural methods of intervention, aiming at health or beauty retrieval. Among the natural methods, applied both for treatment or prophylactic objectives, massage plays a significant role. This involves a set of manual procedures related to tissues deformation of mechanical stimulation nature, of variable intensity. A masseur acts on the skin, subcutaneous tissue, muscles, joints as well as internal organs and systems. A massage regenerates, cures, relaxes and regulates the muscle tension, restores physical harmony and increases general organism immunity. These objectives are achieved through a skilful combination of various forms and techniques of interaction, either manual or involving tools application.

Before massage permanently established its position in the group of independent medical procedures, it had undergone numerous changes related to the progress of anatomical, histological, physiological and neurophysiological knowledge.

The aim of this article is presenting the role of massage in relation to the changing demand for this kind of therapy, on the basis of available reports.

Massage, as Komenetz (7) states in the History of Massage, was mentioned already in the ancient Babylon and Assyria. At the beginning of its way, it was one of the elements of the religious ritual in India and China. Detailed information concerning massage application appears in the Indian books of wisdom, Vedas, whose origins go back to B.C. 1800. With time, massage slowly has been abandoned as a religious ritual. Its therapeutic aspect was perceived. Short mentions appearing in the works of Hippocrates, Celsus and Galen recommend massage in some diseases.

Greeks and Romans, using it as a healing, sport and cosmetic procedure at the same time, noticed specific attributes of massage. In ancient Greece, the sportsmen taking part in the Olympic games were massaged. Although it was mere smearing the body with olive oil, these procedures gave the birth to the classical massage development. From the diaries of Julius Cesar we learn that he suffered from sciatica, which was treated with patting, pinching and kneading. Using a certain form

of bathing in vapour-baths in some Slavic countries, also in Poland, dates back to the 14th century, after which people were subjected to whipping – patting around with twigs, in order to improve the blood circulation.

It was talked about massage, in its literal meaning, only in the 16th century, when a French surgeon Ambroise Paré observed positive effects, particularly on the patients massaged after operations, and he pronounced massage as an official method of treatment. Massage, as one of the therapeutic methods, has undergone continuous evolution. Successful attempts have been made to establish the main rules of this procedure and determine indications and contraindications to its application.

A real evolution of massage took place only at the beginning of the 19th century. It was then that Swedish physicians developed a method called “Swedish gymnastics”, in which massage was one of the elements of the procedure. For the first time physicians worked out rules of using this type of therapy in individual disease entity and also in prophylactics. In the years 1839–1909, a Dutch physician Johan Mezger, on the basis of his own research and experience, developed a whole massage system, becoming a precursor of the “scientific massage” fundamentals. Supporting himself with the available medical knowledge, he initiated further work related to the local and reflective effect on the organism. On account of his contribution this method of therapy has permanently entered the assortment of rehabilitation procedures. One of Mezenger’s students was a Pole, professor of the University in Berlin, the manager of the University Institute of Therapeutic Massage, Izydor Zabłudowski. Thanks to him, massage obtained its appropriate rank, comparable with other branches of medical knowledge.

In the 20th century, for some time, the medicine departure from massage was perceived, which was related to the dynamic development of chemistry and pharmaceutical industry. Presently, a certain tendency to the rebirth of all kinds of natural treatment methods can be observed, in this number also massage. However, there is still research conducted to find convincing and well-documented reports explaining the effectiveness of this method of treatment (10, 15).

In the literature, we come across several variations of massage. On the European grounds, the most popular is the division of the therapeutic massage, which includes: classical, specialist, in water environment, instrumental, cosmetic and sport massage; what was presented in Table 1 (11).

Massaging the patient’s body we apply specific techniques, which we use in a specified order, stressing their strength and duration, depending on the kind of massage and the therapeutic requirements. Among the techniques, we distinguish: stroking, rubbing, patting, vibration, shaking, agitation and rolling out. Retaining the massage direction is of extremely important significance. Prochowicz states that on the venous system the direction toward the heart should be applied, and on the lymphatic system the lymph should be directed towards the nearest lymphatic nodes, and on the nervous system the massage should be led from the peripheral sections to the central nervous system, on muscles – considering their anatomical course (11).

Massage, in classical understanding, has very extensive applications; among others, in selected illnesses of circulatory, muscular and nervous systems. It facilitates the therapy in dysfunctions of motor organs and rheumatic diseases (11). A properly performed massage, observing the procedure indications, has an effect which aids the therapeutic process, and one performed incorrectly, by a non-professional, disregarding sufficient knowledge on the contraindications may prove harmful.

The role of a massager consists of ensuring that the applied therapy did not harm. Contraindications to classical massage available in the literature are discussed in sufficient detail. The ones listed by Storck (12) are split in the categories: general, which include, among others: acute inflammatory states, breaking the skin continuity, thrombophlebitis, arterial embolisms, diseases of pyramidal tracts and cerebellum, neoplastic and infectious diseases, cardiologic, pulmonary or metabolic disorders.

Among temporary contraindications, he mentions posttraumatic and postoperative conditions, related to too early treatment attempts. He suggests that after noncomplex operations on the knee joint, massage of the quadriceps should be introduced after four weeks; in conditions after limbs fractures, after endoprosthesoplastic procedures – after twelve weeks; and after the intervertebral disc removal – within the range of the third and sixth month. A year time should elapse before massage application after a scoliosis operative treatment, where autogenic material was used. In case of fractures provided with metal connections, the massage application is recommended only after their removal. The puberty period and longstanding immobilisation with the features of circulation dysfunction are classified within the relative contraindications. A massage has a multisided effect on the organism, thus of an enormous significance for its faultless performance is an adequate diagnosis followed by adequate performance, according to the directive *ante actum gnosis est posita* (12).

Table 1. Division of the therapeutic massage, according to Prochowicz

Therapeutic massage					
Classical massage	Specialist massages: Segmental massage Connective-tissue massage Periosteum massage Isothermal massage Lymphatic drainage Chinese massage Shiatsu massage Shantala massage	Massage in water environment: Vibratory massage Underwater massage Douche massage Lateral douches (coat massage)	Instrumental massage: Vibratory massage Pneumatic massage Syncardiac massage	Sport massage	Cosmetic massage

Applying massage, we expect to evoke some specific effects related to the influence on the muscular, vascular, immune or nervous systems. Mostly, we apply a therapeutic massage to relieve or reduce some kinds of pain, to improve the regulation mechanisms of the circulatory and respiratory systems, counteract the results of hypokinesis or suppress the disorders within muscles, joints and subcutaneous connective tissue. One of the results of mechanical stimulation is improved blood and lymph distribution, as well as appearance of noticeable changes in the vegetative system (3, 4).

Therefore, like before other forms of curative procedures, we also put objectives before this kind of therapy, which, among others, concern: participation in eliminating pathogenic processes, constricting their after-effects and reoccurrence; which in consequence aims at health recovery and consolidation.

Massage, like other curing methods, to be comparable as to the therapeutic results, should take into account the principles of methodological and clinical estimation. So far, in the case of massage, there are no univocal, and at the same time repeatable, research criteria. Attempts made by Polish authors, Kassolik and Andrzejewski, seem to sort out and rationalise proceedings in this question, because they refer to: “theoretical justification of the purposefulness of activities, the patient’s condition diagnosing, estimating and controlling methods, methodology of action plan development, as well as the method of evaluating the final treatment results”. Massage, called by the authors

“medical”, mainly involves “an intentional elastic deformation of tissues, taking the laws of structure in account, including the rule of tensegrity and their bio-dynamism” (6, 8, 9).

In spite of the fact that massage is not comparable with the radical procedures existing in the conventional medicine, the question related to the final effect of the therapy is similar and lays at the fundamentals of each medical practice. So understood massage final effect brings it nearer to the questions raised by EBM (Evidence-based Medicine), where the final effect examination, in repeatable trials, is the most crucial. Ernst, writing about massage, investigates patient’s safety, because events of catastrophic nature are common for the taken actions in medical understanding. In his article, he publishes information about a significant increase (100%) in undesirable results related to manipulations carried out on the vertebral column with the use of various massage techniques. In the group of the unfavourable complications we find, among others, cerebro-vascular incidents, haematomas, nerves defects, pulmonary embolisms, and even suffocation/strangulation during a manipulation on the cervical spine. However, most of the cases had a transient character. In the analysis of the collected material, it is noteworthy that there are correlations between the method, strength and type of the massage applied and the side effects. Relevant for the problem are the skills of the massager, or rather the lack of them (2).

Using in practice massage of different character and purpose, and applying it in accordance with the art, we anticipate positive changes, which not always, however, find their confirmation in the available biochemical or functional examinations. Such examples appear in the course of investigation on the massage influence on the post-exercise restitution, observed in the sport medicine.

From the work of Ciechomski it emerges that classical massage applied after physical effort, with the use of weight increasing to the maximal, appeared to be insufficient to bring back the prooxidant-antioxidant balance. Biochemical research did not show any effect on the pace of the lactic acid utilization (1). In numerous works, the researchers analyse the influence of the sport massage on alleviation of the symptoms of DOMS (delayed onset muscle soreness) – postponed in time onset of muscles painfulness, oedema and hypersensitivity, after excentric efforts (5). A carried out experiment does not provide an unambiguous answer to the question whether the taken actions alleviate the ailments occurring in this syndrome. In a research work related to the same subject, Zainuddin and team observed that under the influence of sport massage it was possible to reduce post-exercise oedema by 30%, the level of creatine kinase in the plasma decreased. However, the achieved parameters did not affect the function improvement (14).

For an evaluation of the impact of the therapeutic massage applied in the lumbar muscles amyosthenia, Tanaka and team made an analysis of the EMG record from the massaged muscles, which did not show any changes which would significantly confirm advisability of the applied therapy (13).

To develop a proper attitude to massage, one has to, first of all, understand its nature and the mechanisms associated with its influence on tissues and organs. One has to learn the anatomy, physiology, biochemistry, neurophysiology; especially that a tissue subjected to mechanical deformations releases processes the scope of which is, at this state of knowledge, neither fully recognised, explained nor documented.

Many researchers, reporting on the therapeutic outcomes achieved, present contradictive results of their research. The documentation of the collected material allows to analyse the information from the literature related to the massage impact in selected disease entities or motor organs dysfunctions, however, with the reservation that the achieved results require further observations, with a participation of a greater group of examined patients. Presently, new methods of efficient measurement of the effects achieved during massage are sought for, to meet the demands imposed by medicine based on evidence. Biochemical and functional examinations are being employed,

measurements of bioelectric record from muscles are used, observations related to the participation of the fascia in tensions transfer are carried out (6). And all this serves to grant massage its proper rank. It seems that objectification of the therapeutic effects arising from massage application in treatment, beside doubtlessly positive subjective feeling of the patients, would significantly have an effect on the advisability of the applied method.

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SUMMARY

In these days, when the pace of life becomes faster and faster, it is important that people could retain their health in the state of full physical and psychical prosperity. For this purpose, many of us use the dynamically developing biological revitalisation centres, showing a positive attitude towards the methods of natural treatment, among which massage plays an enormous role. The purpose of this study is to present the role of massage against the background of the changing demand for this kind of therapy, as exemplified by available reports.

Masaż dawniej, dziś i wyzwania na przyszłość

W dzisiejszych czasach, kiedy tempo życia staje się coraz szybsze, ważne jest, aby człowiek potrafił utrzymać zdrowie w pełnym fizycznym i psychicznym dobrostanie. W tym celu oprócz farmakoterapii wielu z nas korzysta z dynamicznie rozwijających się ośrodków odnowy biologicznej, pozytywnie odnosząc się do naturalnych metod leczenia, wśród których ogromną rolę odgrywa masaż. Celem pracy jest przedstawienie roli masażu na tle zmieniającego się zapotrzebowania na ten rodzaj terapii na przykładzie dostępnych doniesień.