

# **Experimental investigations of post mortem bioelectrographic images of human fingers**

**Konstantin G. Korotkov,**

Ph.D., Prof., Technical University "SPIFMO", Saint Petersburg, Russia;

Ph work (7-812) 232 86 02; Ph/fax: (7-812) 164 83 69; E-mail: [korotkov@mail.admiral.ru](mailto:korotkov@mail.admiral.ru)

Postal address: PL 88, 53101 Lappeenranta, Finland

## **Abstract**

Time-dependence curves of evoked Bioelectrography parameters for 3-6 days after death was taken with specially designed apparatus based on Kirlian effect. According to the character of the time-dependence curves experimental data were arranged into three groups: 1) Curves with relatively small variation amplitude; 2) Curves with availability of one pronounced peak for several hours after death and relatively small amplitude afterwards; 3) Curves with large amplitude variations, which continue for a long time. It was found out that each of these groups is characterised by a certain kind of death: I group: "calm death" as a result of natural motives, stipulated by organism's condition, generally in the old age. II group: "unexpected death" in the issue of traffic accident followed by craniocerebral trauma. III group: "unnatural death" as a consequence of unfavourable concurrence of circumstances: a suicide, a murder, improper medical care, lungs clot. Different interpretations of the experimental data are presented.

## **Introduction**

A characteristic feature of the present day lies in the realisation of the fact that most of the problems taken up by the modern civilisation somehow or other come together to a human being – his or her life, health, and the very essence of the existence. Western science has gradually been reaching a new picture of the world where Consciousness of a human being, structure of his or her energy-informational fields is the forming element of physical world. This work is an example of a technocratic approach to studying one of the cardinal questions of Human existence – question of Life and Death – and represents a summary of results of experimental research on post mortem evoked bioelectrographic activity of the human body on the basis of Kirlian effect.

## **Problem setting**

Life after death. This problem has not arisen today, it does not concern fashion or advertising campaigns. Within centuries, from the moment of HOMO SAPIENS birth this problem has worried the Humanity. Nowadays the ancient philosophic question of Life after Death emerges in a new light: is it possible to fix activity processes after Death by the modern science techniques, within the scope of western scientific paradigm; is it possible to fix objectively, not resting upon subjective sense, the process of separation of the two

substances – immortal soul and mortal body? Whether this separation occurs immediately, or whether the soul leaves the body gradually, whether this process is the same for a calmly passed person and for an unexpectedly perished person, whether the stories of the ghosts' night travels and after-death communications are somehow justified? To take an approach to these issues from the direction of modern scientific paradigm, objective, reproducible experimental methods are indispensable. The first results of using such methods are described in this work.

The analysis of information concerning the processes of human activity after death shows that all the data is divided into three groups:

- religious, mystic and esoteric notions of the post mortem life of soul, obtained by way of revelations, spiritual contacts and hallucinations;
- data on the consciousness' post mortem activity, collected with the help of near-death experiences (NDE), as well as by neoclassic scientific schools – parapsychology, transpersonal psychology, thanatology;
- experimental data on physicochemical changes, happening to the human body after death.

First two groups of data are subjective, irreproducible, their presentation form depends upon culture, epoch and race, but basically these data is concentrated on either form of life of soul after death, that is after stopping of functioning mechanism to which the soul was joined – stopping of body activity. More and more information, concerning the fact that the soul can leave the body, exist beyond it, experience senses, and then come back into it and continue its earth being, is accumulated (Kardec, 1975; Jung, 1960; Moody, 1976; Grof, 1993).

The other group of data includes purely materialistic, pathologic-anatomic facts regarding the changes happening to the mechanism of human body after stopping its functioning. This process is one-sided and after a certain moment irreversible – as any mechanism, the body is able to function only provided that its main elements, and, first of all, the central co-ordinator – brain, are integral and capable of working. However, destruction in its delicate elements takes mere hours. The investigation of physicochemical processes, taking place in the body tissues after death, showed that the change of parameters in time under stable conditions has linear or logarithmic nature, which fact gave an opportunity to create techniques determining the moment of death occurrence by examination of the body (Polson et al, 1985).

The basic problem of experimental research for us to set was looking for the objectively reproducible proofs of separation of spiritual substance from its material bearer. In addition, there were reasons to assume that this separation did not keep within a single moment, that it was a time consuming process having its certain rules. Even from a medical point of view today it is difficult to determine the notion of the moment of death (except for the cases of mechanical body damage). And not to mention the bodies maintained by artificial devices in an unconscious state during an indefinitely long period. Practically all the religions emphasise a more or less prolonged connection of the soul with the body. But what can be given as an experimental proof for such a connection? What body parameters should be investigated and what should be found in these parameters? In our opinion, the answer lies in the very nature of the information obtained. Physicochemical processes, in

their essence, are gradual processes causing relatively smooth variation of tissular and cellular substances and, correspondingly, smooth variation of parameters of these substances in time. Hence, non-monotone, abrupt change of characteristics will indicate processing of some dramatic body modifications. This is the general rule of experimental science: presence of non-monotonies on the process time curve point to the existence of some inner reconstructions or transformations of the investigated object.

Experimental research of such changes should conform to the rules common to the whole European scientific paradigm, and, above all, they should be reproducible, at least in a statistical sense. In these experiments each object investigated is particularly individual and has its subjective behaviour, however, some regularities common to all the objects may be observed. This applies to the next important condition: independence and objectivity of the experimental data. It means that the results should not depend on the changes of the environmental conditions, on the devices' working features and on the experimenter's wish. As a rule, evident or latent, there are such dependencies in every experiment, and the experimenter's task is to consider them maximally and reduce their influence to minimum. Opportunity to reproduce results of the experiment in another place by an independent group is also most important.

And, finally, one more question: what characteristics of the processes, what parameters can reveal the material bearer response to the moving of spiritual substance? To our mind, these parameters should be the ones to demonstrate such a connection during the life, in other words, to correlate with psycho-psychical processes in one's lifetime. We were far from considering all possible processes of such kind, this is a topic for a particular research work, we dwell upon a group of parameters related to recording tissue evoked bioelectrography signals, well-known as "Kirlian effect" (Mandel, 1987; Snelgrove, 1996; Korotkov, 1998a).

The effect of fluorescence emergence close to the object's surface in high-intensity electromagnetic field was discovered more than two centuries ago, but became well-known owing to Russian inventors – married couple Kirlians. Having a particular skill, it is possible to make any object – coins, leaves, parts of coverlet, fingers – to glow. The characteristics of patient's hands' luminescence depend on his psycho-physiological condition and, to be more exact, on his energetics state. Person full of life energy and health has bright and even fluorescence; energetics disorders, inflammatory processes evoke fractures, lapses and heterogeneities in the fluorescence (fig.1). The coming disease, which has not yet become apparent on the organic level, gives a signal by damping, uneven and disrupted luminescence. Research of many years has given an opportunity to create an effective technique of express-evaluation of psycho-physiologic and energetic condition of a patient, based on the use of computer processing of images and data conversion, which has become wide spread throughout the world – Gas Discharge Visualization (GDV) Technique (Korotkov, 1998a).

#### **Methods of experiments arrangement**

Experimental investigations were carried out under stable conditions: in the same room, by the same equipment, stabilising and maintaining all the parameters on the level of stability not less than 1%. In the course of work the equipment was exposed to periodical

calibration. Constant temperature of  $+18 \pm 2 \text{ C}^\circ$ , determined by the work of evaporation and heating systems, was kept up in the room.

The body, chosen for the investigation, was brought to the experimental room and set in a definite place by its head oriented to the West and its legs – to the East. The left hand was fixed on the device's electrode by a special appliance, providing the hand and fingers stationary position on the electrode during the experimental session. The measurements showed that the system chosen provided good hand fixation and, at the same time, did not put pressure or compression upon the hand, which could have affected the experimental results. Bioelectrography images of the left hand – of forefinger, middle finger, ring finger and little finger – were taken. The option of body and hand position was determined by the convenience of equipment arrangement in the room and in the course of all the experiments remained the same. The selection of fingers was determined by the fixative system structure.

Within the most of experimental sessions a photographic method of Bioelectrography patterns' recording was applied; black-and-white photo-paper, thin, standard and unwinded of a single roll, was used. Afterwards the data was acknowledged with the help of a computerized device GDV-camera (Korotkov, 1998a).

The shooting of parameters was carried out every hour round-the-clock, therefore each series of experiments took a few groups of operators trading places every 8-10 hours. The operators' task included: once an hour go down to the experimental room, dry a photo-paper list (date, time), put the photo-paper under the fingers and take two gas-discharge photos onto one list, having simultaneously exposed a metal bench mark object on the same list. Exhibited photo-paper was put into a black envelope. The equipment was constructed so that to perform photographing it was only necessary to push the button. Once or twice a day all the photo-materials exhibited by that time were processed in vats, containing 10 liters of green solutions. Having completed an experiment, the whole series of photos was sent for the computer processing. Every picture was taken by the scanner, adjusted in a definite mode, the received computer images were processed with the help of a specially designed software, providing for the area calculation with preliminary picture binarisation on a fixed brightness level. Later on the graphic charts of illumination area and post mortem time were plotted.

Few times a day gas-discharge photography of the operators' fingers was implemented, as well, which helped to keep an eye on their state. On an experiment's completion, the body was sent for a pathologoanatomic investigation.

Thus, all the experimental process consisted of three quasi-independent stages:

- preparation stage, including equipment adjustment and testing, selection of the investigation object and its arrangement;
- the stage of experiment's implementation, including direct obtaining of the experimental data;
- the stage of experimental data computer processing.

Each of these stages was carried into effect by a particular team under Dr. K. Korotkov's general supervision and control.

Such kind of working organisation guaranteed the independence of data, obtained from one or another executor – his skills, training and results motives. The factor of subjectivity

and unconscious influence on the result was practically eliminated. It is necessary to pay particular attention to this factor when carrying out experiments in the sphere of frontier sciences.

### **The main experimental results**

On the whole, in the period of two years 26 experimental sessions were put into practice, each of which took from three to five days. Among the dead were both men and women aged from 19 to 70.

The very first experiments demonstrated that dead bodies have a particular intensity of gas-discharge fluorescence, which changes according to certain rules, nevertheless there is no distinction in kind between gas-discharge fluorescence of the alive and the dead immediately after death. It was found out that different types of Kirlianograms (Mandel, 1987; Korotkov, 1998) were observed, and in the course of time a change of one for another took place. Total emanation intensity was going down, however not to zero, but to some stationary value. The analysis of large group of experimental data gave an opportunity to arrange it into three groups according to the character of time dependence of parameters (fig.2):

- I. Curves with relatively small variation amplitude;
- II. Curves with availability of one pronounced peak for several hours after death and relatively small amplitude afterwards;
- III. Curves with large amplitude variations, which continue for a long time.

Comparing this information with the dead person's history, it was found out that each of these groups is characterised by a certain kind of death.

I group: "calm death" as a result of natural motives, stipulated by organism's condition, generally in the old age.

II group: "unexpected death" in the issue of traffic accident followed by craniocerebral trauma.

III group: "unnatural death" as a consequence of unfavourable concourse of circumstances: a suicide, a murder, improper medical care, lungs clot.

It is worth stressing that this arrangement is relative and does not claim to be final – it is obviously the pilot study. Later on the character of this classification may be changed. Let us specify the main features of the curves, common to every group.

**I group.** Two sections may be indicated on the curve: section having pronounced variation of the curve relative to the mean level (standard deviation  $S \leq 150$ ) lasting from 16 to 55 hours; section having slight variation ( $S \leq 60$ ) continuing until the end of data shooting (fig.2, curve 1).

**II group.** A pronounced peak is observed during first hours after death, then the glow intensity decreases abruptly and in about a day variations become fractional (fig.2, curve 2).

**III group.** Greater amplitude and length of variations comparing to the previous groups is observed ( $S > 200$ ), as well as a number of features less typical of the other groups (fig.2, curve 3, fig.3):

- total amplitude declining from the start to the end of the experiment.
- emergence of considerable outbursts of luminescence, separated from the main picture, being the brightest after death and gradually decreasing in time;

- rise of fluorescence intensity, of different activity and length, at nights, beginning from 9 p.m.;

The groups specified also differ in general nature of fluorescence, which becomes apparent in various types of images. Still, in all cases the fluorescence has oppressed, defective character, comparable to the luminescence of the alive people having considerably impaired energetics, for instance, cancer patients. Time curve of the glow of bench mark metal object indicated variations at the level of  $S \leq 10$ , which is much less than the values obtained for the dead.

### **Discussion**

The data presented give rise to many questions. What could this all mean? To what factors could the observed changes be relate? What conclusions may be drawn? And, naturally, the first question to be answered is: to what extent are the received data demonstrative, whether these data is concerned with mere experimental precision or registration of trivial physiological processes?. Let us dream up on the subject of the data obtained, citing all the interpretations, objections and arguments, which come to mind.

First objection, coming from the lips of sensible pragmatic materialist: “All this is a nonsense and a waste of time and money. In two days after death the body cannot have any activity except for the decomposition processes. The variations recorded are nothing but unimportant fluctuations, determined by the temperature disturbances”.

The respond to this argument is the simplest. The future critics are likely to reveal more than one flaw in the technique of the experiments' arrangements, but on the first stage, for pilot investigations, it seems to be quite satisfactory. This is indicated even by general character of the results obtained, for example, by total decline of fluorescence from the beginning up to the end of the experiment, however the decline is not the same for all the situations, but depended upon the subject state. And in a number of cases, we even observe the rise of characteristics by the end! Moreover, together with the registration of fingers' luminescence the registration of bench mark's signal was carried out. The curve, demonstrating the change of bench mark fluorescence, is the indicator of the method's inaccuracy. For all the experiments the range of bench mark curve fluctuations is  $S < 10$ , which is much lower than the fluctuation range for the “calmest” case. Particularly, during the night rise of fluorescence this factor was considered even more thoroughly, and, in addition, it was indicated that the amplitude of bench mark signal had not practically changed. Careful comparison with meteorological and electromagnetic atmosphere parameters was carried into effect, which showed absence of a distinct connection of these factors with the experimental data. Detailed discussion of the experiments' methodical aspects in the most strict scientific circles did not disclose any sources of inaccuracy, which helps to escape doubts concerning authenticity of the results stated.

Having listened to the explanation suggested, our materialistic critic may adduce the following argument: “All the facts mentioned do not give rise to doubts from the experiment-setting point of view, however they fix only residual physiologic activity of muscular tissues, which undergo transformation in the process of decomposition. Processes, individual for every pattern, depending on the age of epidermis and conditions under which

it was found, occur in the tissue. There are no grounds to discuss any connection of the data obtained with the personality of its former owner”.

In our opinion, the main reply to this argument is the very nature of the information received and, first of all, the arrangement of information in three groups, somehow correlating with the character and the reason for death. The features of data stated call attention, as well.

Electrophysiological characteristics, known from the literature, evaluated after the death, change sharply within the first hours, and then either remain constant or change smoothly, as smooth curves. In no work have we discovered the fixation of variation processes, and, particularly, processes possessing features similar to the mentioned before. Nevertheless, it is not eliminated that a more thorough analysis will allow disclosing other techniques, which register energy-informational activity of the body after death. At the same time, physiology states that variation processes having periodic rises and falls within some hours are typical of dynamic vital activity systems. The investigations of characteristics of meat foods' gas-discharge fluorescence (for the purpose of revealing its quality), implemented by us, have demonstrated a monotone degradation of glow in time, keeping the meat under room conditions. At that, occurrence of abnormal outbursts or spots has never been recorded.

The simplest way-out is to proclaim that the curves obtained represent the fixation of trivial biological processes and, hence, brush them away, as were brushed away meteors in XVIII, hypnosis in XIX and telepathy in XX centuries. As S.Grof (1993) remarkably put it: “World view, having become obsolete for the present-day physics, is considered scientific as before in many other fields – a detriment of the future progress. Observations and facts, contrary to Universe mechanistic model, are likely to be rejected or concealed, and the research projects, not corresponding with the dominating paradigm, are deprived of financing. The most striking examples are psychology, alternative approaches to medicine, psychedelics' investigations, thanatology and some spheres of field anthropological research”.

So, in what way the received data may be interpreted? We suppose that it would be a natural to relate the data to the conception of existence of two corresponding, but quasi-independent human natures: physical body and energy-informational structure. We do not resort to the words “soul” or “spirit” deliberately, since these terms are associated with a certain range of ideas, bearing a strongly pronounced religious and esoteric tinge. We are talking about energy-informational structure as an objective space-field structure, interconnected with human body, but existing independently of it, particularly for some definite time after death. This structure originates from the birth and changes in the process of “morphogenetic synergism”; such notions have recently been developed by us (Korotkov and Kouznetsov, 1996) on the basis of synergism ideas, information theory and theory of grand systems.

### **Conclusion**

In recent years the experiments described have time and again been repeated, particularly by the other investigators, the results obtained have remained in complete concordance with those stated above. They correlate with the results, received by means of the other methods (Moody, 1992; Botkin, 2000). Of course, this is just a pilot study. Apart from the touched upon subject, a number of extremely interesting issues arise: investigation of the very moment of transition, from the condition of life to the condition of death in reanimation departments, disclosing peculiarities and features of such a transition. We have received provisional data demonstrating that in some cases in a few days before death the raise of patient's activity and increase of gas-discharge intensity are observed. Such data may provide for a new information on the process of Transition to other Life. Another problem – the influence of diseases, traumas, mental health and dying condition on the process of posthumous transformation.

The developed method of experimental investigation of the post mortem energy-informational activity processes offers new challenges to studying one of the most mysterious periods of human life.

Comprehension and analysis of the results received introduce into the issues, being considered not only biological or practical ideas, but also notions of general science and philosophy. Many of these questions, as well as our “non-standard” impressions: association with the “substances” of the dead, energy outflow as a result of the experiments, relation of images to chakras; conceptual ideas and notions, are studied in the author's book (Korotkov, 1998b).

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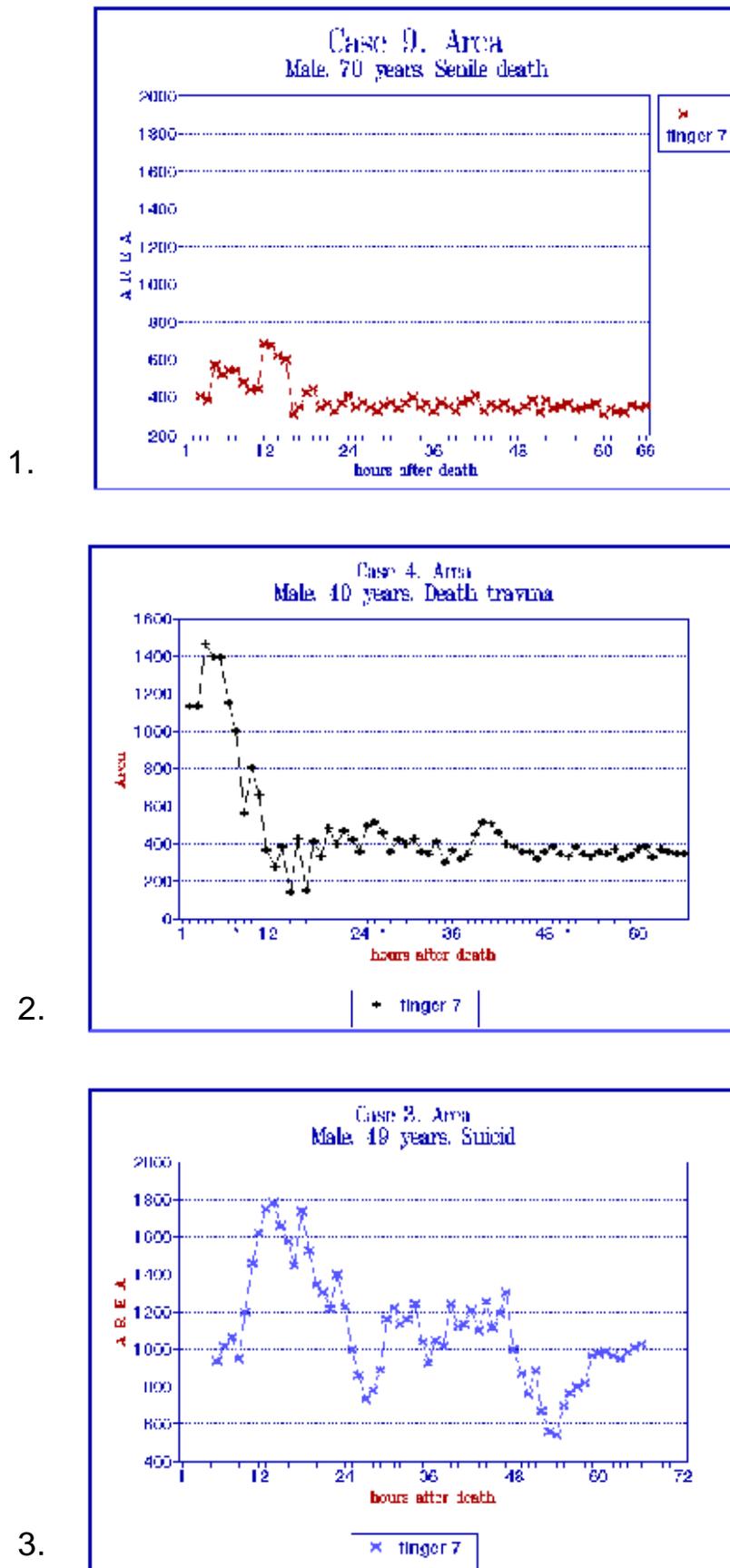


Fig.2. Time dependence of evoked bioelectrography signals intensity (Kirlian effect) for different types of death.  
1 - calm death; 2 - traffic accident; 3 - unnatural death.

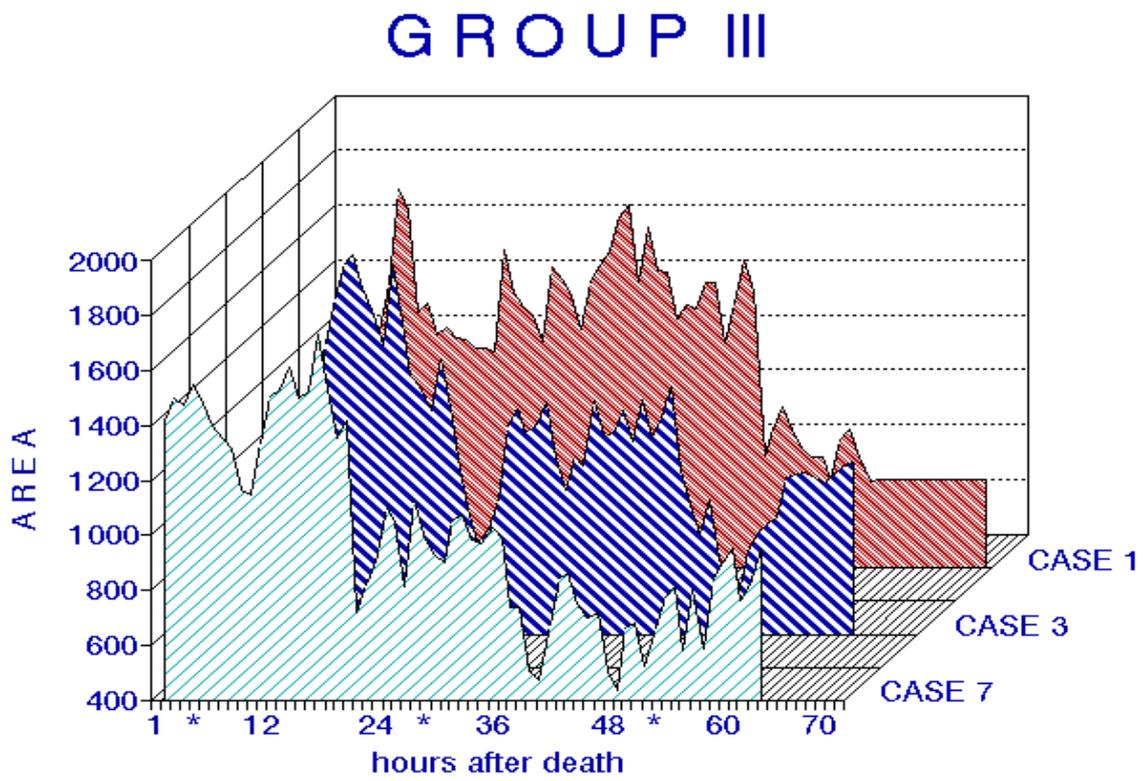


Fig.3. Time dependence of evoked Bioelectrography signals intensity (Kirlian effect) for different cases of the 3<sup>rd</sup> group.