

REVIEW ARTICLE

Nocebo: Three cases

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Abstract:

Nocebo effect is due to negative expectations of the treatment. It is belief which strongly influences the outcome of disease. Three cases presented here, have an irrational response to scientific medical procedures due to lack of trust. Agnosis leads to faith in superstitions.

Introduction:

Nocebo is a Latin term by mean "I shall harm"¹. This term was first used by Walter Kennedy in 1961 as counterpart of placebo. Placebo is also Latin term by mean "I Shall please"². Nocebo is phenomenon of perception, if the expectations are negative than they influence the results expected³. The thought, faith, belief and expectation can influence the outcome of treatment and surgery⁴. Nocebo effect is when thoughts are negative about outcome. On contrary positive thoughts results in positive effects, even if an inert drug is used⁵. Placebo and nocebo both have not only psychological effect, but they also produce physiological changes in brain, body and behaviour⁶. In 2012 Hauser W, et al reviewed 31 studies on nocebo effects, the outcome was manifestations of symptoms include nausea, gastric pain, itching, bloating, depression, insomnia, loss of appetite, sexual dysfunction and severe hypotension. Nocebo is not an iatrogenic response of drugs^{4,7}. Iatrogenesis is induced by words or actions of the physician or by medical treatment or diagnostic procedure⁸. In nocebo response verbal suggestions can cause

Case study one: Propaganda and Rhetoricism:

A female patient aged 45 years came for FNAC of left breast mass. FNAC performed and reported as malignant cells suggestive of invasive ductal carcinoma. After one-month same patient came back and request to repeat the FNAC. Patient enquired if she had been reported as malignant cells one month before, then what is the reason to repeat the FNAC? Answer was that she is under treatment of "Hakeem" at the village, who is cancer specialist and treated many patients which were suffering from carcinoma. Now he wanted to see prognosis on FNAC reports.

Case study two: Mistrust and superstitions: A male patient aged 42 years, referred for FNAC of right cervical lymphadenopathy. On examination there were multiple enlarged lymph nodes, hard in consistency. On FNAC and CBC lymphoma cells were identified. Lymph node biopsy was suggested to confirm the diagnosis. Patient did not collect the report. He called on cell phone and informed that he is suffering from serious disease but not responded. One month later his relative came to collect the report. On enquiring her replied that "Though what the report is suggesting but patient is well, he was under the curse of shadow. Now he is well by the practices of witchcraft.

hyperalgesia or increased sensitivity to pain and allodynia, which is knowing as perception of a tactile stimulus as pain⁹. These effects are caused due to activation of cholecystokinin receptors¹⁰. In ambiguous usage of nocebo term, some people maintain that belief kills (voodoo death) and also heals (Faith healing)¹¹. Voodoo death, known as psychogenic death or psychosomatic death is phenomenon of sudden death as brought about long emotional shock due to sympathetic adrenal excitation⁽¹²⁾. Faith healing is concept that the healing of a disease can be brought about by prayer and other rituals that can stimulate the divine presence and power¹³. Faith is confidence or trust in a particular system of religious belief¹⁴. An atheist may have faith and belief that no deities exists, belief is state of mind which represent a positive attitude towards likelihood of something being true¹⁵. Here we will discuss three cases which might have no faith or confidence in scientific medical procedures and the outcome is nocebo response. All three cases belong to area of "THAR" desert. Which is in province of Sindh, South east of Pakistan.

Case study three: Excess of religion and bid'ah: A male patient aged 26 years. On incisional biopsy of buccal mucosa, diagnosed as moderately differentiated squamous cell carcinoma. He went for chemotherapy and periodically visited the laboratory for CBC. Apparently, his condition was deteriorating due to side effects of chemotherapy. Suddenly he stopped chemotherapy and instead by advice of local "Amil" he was taking herbs and "water of Dum".

Discussion:

Culture bound syndromes are described in literature, in which the culture provides an etiology, diagnosis, preventive measures and healing¹⁶. Faith and traditions have retrograde influences. They occupy and has accommodate each other. Even the same religion has got different practices of performances. Ironically the literacy by definition itself is illiterate at the level of various standards of knowledge. Although some observers attribute nocebo response to subject's gullibility but instead of that in real sense it is credible response of the subject. He is gullible to tricks of society but credible to faith. Where there is faith, there is no discussion, only way is to surrender, and surrender gives a relief. In all three cases nocebo is mistrusted response. Though there is physiological deterioration but psychological amelioration. The

classes of people especially children, elderly and developmentally disabled are more vulnerable to exploitation due to gullibility¹⁷. As in case study one a patient suffering from carcinoma is exploited by “Hakeem”, who is famous for treating malignant diseases. In low socio-economical societies there is failure of the social intelligence, in which a person is easily tricked or manipulated into an ill-advised course of action¹⁸. The walls of towns and villages are full of such an advertisement that a common people are attracted and exploited. In case study two, lymphadenopathy has its own anthropological history. It remains mysterious, had been considered as curse which brings the harm. In middle ages, it was believed that Royal touch, the touch of sovereign of England or France could cure disease due to the divine right sovereigns, therefore it was known as kings evil¹⁹. Lymphadenopathy has a history of superstitions. Superstitious practices are still there in helpless fearful societies. It is due to misunderstanding of science or irrational belief in fate or magic²⁰. Superstitions in Didero’s encyclopedia are defined as any excess of religion in general and links it specially with

paganism²¹The term paganism is first used in the fourth century for the population of Roman empire who practiced polytheism. In case study three, nocebo is outcome of mistrust and nonacceptance of scientific medical procedures. The religion may be innovated and modified to accommodate the aberrance. Religious superstitions are bid’ah. Bid’ah means innovations in religion i.e. new methods of worship, festivals, beliefs etc²²

Conclusion:

Nocebo is paradoxical to placebo. Prevalence of sense of helplessness in society opens gates of misdirection. At the point of acceptance, faith is bipolar. It is both healer or killer. Under the influence of belief, the efficacy of scientific medical procedures become double, otherwise wane even not a single. In ignorant societies, there are irrational superstitious practices. Nocebo response is when thoughts are negative about outcome of scientific medical procedures.

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