Exploring role of nanotechnology in cardiovascular management in urban societies

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Abstract
This study was intended to explore the applicability of the Nanotechnology in Cardiovascular Management. The research study was carried in context of the theoretical context. The secondary support has been adopted for exploring the results of the study. The meta-analysis technique has been adopted to explore the results of the study. The results obtained on the basis of eth evidence reported in the above stated review indicated that nanotechnology hold effective role in treatment of the cardiovascular diseases. The development of nanotechnology has been systematically passed number of procedure. However, with the growing investment in nanotechnology and appropriate infrastructure globally, it is only a matter of time before Nano medicines, nanomaterial devices, and other related technologies successfully complete the rigorous clinical trial procedure and reach the market.

Keywords: nanotechnology, cardiovascular management, urban societies

1. Introduction
Cardiovascular Management is considered a global challenge for entire world. In the contemporary world we found that large number of the death is taking place due to cardiac failure. It is conceded the fast life taking disease in the entire world. However, while observing the current status of the cardiovascular endurance then it can be said that this disseises is largely depended on the medicine. Globally, cardiovascular diseases claim a large number of lives; many of these are preventable. The increase in diets high in saturated fat, salt, and sugar, the prevalence of lethargic life style and the prevalence of obesity all contribute to an increase in the occurrence of cardiovascular complexities. These causes, together with more sophisticated methods of diagnosis, have resulted in statistics that demonstrate a definite upward trend in the prevalence of cardiovascular complexities. Currently, treatment options for cardiovascular illnesses are restricted to oral medications or invasive surgery. The both procedure of medicine and technology has been seen adverse in the patients holding co-morbidity or multi-morbidity. In this matter nanotechnology may hold the key to more effective illness therapy, with improved prognoses and a lower risk of side effects. This review will look for potential answers to the restricted number of available pharmacological medicines and the future role of nanotechnology in cardiovascular care. In addition to this the clinical history reveals that in urban areas there is prevalence of sedentary life style so it creates lethargy on part of urban residents. Hypertension and hypercholesterolemia are the main factors of morbidity and mortality in today’s Indian society, since they are two key risk factors for the emergence and development of cardiovascular diseases such as acute myocardial infarction, stroke and thrombosis, among others. Multiple drug therapies for the treatment of these conditions, in most cases based on the use of synthetic active ingredients, are known. However, the use of these drugs frequently results in the occurrence of adverse effects. This fact has led researchers to conduct numerous studies in order to find safer therapeutic alternatives.

1.1 Location of research gap
Nanotechnology being the recent applicability in health system has contributed a lot in the domain of health system. In consonance to same, large number of eth research studies has been conducted in the domain of the applicability of the nanotechnology in health management. The notable research studies have been conducted by; Sahoo and Labhasetwar

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Polymeric nanoparticles make up a large class of system. These consists of solid nanoparticles, amphiphilic nanoparticles, forming micelles, vesicles and rods, dendrites, and star-shaped systems. This system possesses their own unique architecture and properties. Apart from this polymer based system are more cost effective and easier to manufacture the scale up compared to liposomes with longer stability profits. Large number of the research studies has supported its applicability of this procedure effective, viz. Sahoo and Labhasetwar (2003), Zhu MT, Wang B, Wang Y et al. (2013) [38], Yilmaz A, Rosch S, Klingel K et al. (2013) [30], Van ES, Leipsic J, Paul Man SF, Sin DD. (2010) [34], Richards JM, Semple SI, Macgillivray TJ et al. (2013) [30], Pai AB, Nielsen JC, Kausz A, Miller P, Owen JS. (2013) [29], Kagaya H, Oba M, Miura Y, Koyama H, Ishii T, Shimada T, Takato T, Katoaoka K, Miyata T (2011) [28], Jain PP, Leber R, Nagaraj C, Leitinger G, Lefoer B, Olschewski H, Olschewski A, Prassi R, Marsh LM (2014) [26].

1.4.3 Dendrimers
Dendrimer is derived from the Greek word dendon, which means tree, and appropriately describes the structure of these frequently branching molecules (Crampton and Simanek 2007). Dendrimers are remarkable due to their tremendous growth and number of dendron (a tremendous growth and almost 50% of the entire molecules are dendrons). Dendrimers are remarkable due to their number of dendron (about 50% of the entire molecules). These systems are more cost effective and easier to manufacture the scale up compared to liposomes with longer stability profits. Large number of the research studies has supported its applicability of this procedure effective, viz. Sahoo and Labhasetwar (2003), Zhu MT, Wang B, Wang Y et al. (2013) [38], Yilmaz A, Rosch S, Klingel K et al. (2013) [30], Van ES, Leipsic J, Paul Man SF, Sin DD. (2010) [34], Richards JM, Semple SI, Macgillivray TJ et al. (2013) [30], Pai AB, Nielsen JC, Kausz A, Miller P, Owen JS. (2013) [29], Kagaya H, Oba M, Miura Y, Koyama H, Ishii T, Shimada T, Takato T, Katoaoka K, Miyata T (2011) [28], Jain PP, Leber R, Nagaraj C, Leitinger G, Lefoer B, Olschewski H, Olschewski A, Prassi R, Marsh LM (2014) [26].

1.4.4 Gel Nanoparticles
The nanoparticles are the least prevalent type of polymer-based particle. These nanoparticles generate hydrogel matrices into which medications can be integrated as the polymer concentration increases. These technologies enable a greater delay in the release of the medicine and improved long-term stability (Hamidi et al. 2008). Nano-coated stents. Apart from the above reported technique and procedure there are number of supplementary procedure which is being used for generating effective contribution in the cardiovascular health management.

Therefore, deepening knowledge and increasing use of nanotechnology as a therapeutic tool for the treatment of many cardiovascular diseases will enable clinicians to achieve objectives that until recently seemed unattainable. This prospect turns nan medicine, together with its advances and applications, into a real light at the end of the tunnel, giving great hope in the near future for the recovery in patients suffering from diseases such as hypertension and atherosclerosis, or who have suffered a cardiovascular event disabling squeal such as AMI or stroke. At the same time, it is probable that even these important developments represent only the beginning of a tremendous growth and development in the field of public health worldwide.

2. Support to findings
The present study reveals that nanotechnology hold effective relevance in the management of cardiovascular diseases. The results of the present study are supported by host of eth researchers like; Zhu MT, Wang B, Wang Y et al. (2013) [38], Yilmaz A, Rosch S, Klingel K et al. (2013) [36], Van ES, Leipsic J, Paul Man SF, Sin DD. (2010) [34], Richards JM, Semple SI, Macgillivray TJ et al. (2013) [30],
Pai AB, Nielsen JC, Kausz A, Miller P, Owen JS. (2013) [29]
Banik BL, Fattahi P, Brown JL (2016) [7],

3. Conclusion
The results obtained on the basis of eth evidence reported in the above mentioned review indicated that nanotechnology hold effective rile in treatment of the cardiovascular diseases. The development of nanotechnology has been systematically passed number of procedure. However, with the growing investment in nanotechnology and appropriate infrastructure globally. There is little doubt that nanotechnology has the potential to improve patient health and general well-being, and that any progressions in current therapeutics will have a positive influence on the lives of patients worldwide. To have the maximum impact in medicine, additional in vivo investigations and clinical trials will need to be undertaken to completely understand the systemic behaviour of Nano particulates. As the future of therapeutics shifts toward more modified medicine, nanotechnology may be best equipped to complete the objective of tailoring treatment to specific disease conditions. Additionally, rising healthcare outflows necessitate the exploration of alternatives to current pharmacological and surgical therapy in order to contain these exponential rises. Besides, there is plentiful evidence to provision the notion that the prevalence of nanotechnology has not yet had a really transformative effect on medicine.

4. Conflict of interest
During the entire research process, the investigator has not declared any conflict of interest.

5. Reference


