Ethical Perspectives on RNA Interference Therapeutics

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Abstract:
RNA interference is a mechanism for controlling normal gene expression which has recently begun to be employed as a potential therapeutic agent for a wide range of disorders, including cancer, infectious diseases and metabolic disorders. Clinical trials with RNA interference have begun. However, challenges such as off-target effects, toxicity and safe delivery methods have to be overcome before RNA interference can be considered as a conventional drug. So, if RNA interference is to be used therapeutically, we should perform a risk-benefit analysis. It is ethically relevant to perform a risk-benefit analysis since ethical obligations about not inflicting harm and promoting good are generally accepted. But the ethical issues in RNA interference therapeutics not only include a risk-benefit analysis, but also considerations about respecting the autonomy of the patient and considerations about justice with regard to the inclusion criteria for participation in clinical trials and health care allocation. RNA interference is considered a new and promising therapeutic approach, but the ethical issues of this method have not been greatly discussed, so this article analyses these issues using the bioethical theory of principles of the American bioethicists, Tom L. Beauchamp and James F. Childress.

Key Word:
Ethics, justice, respect for autonomy, risk-benefit analysis, RNA interference therapeutics.

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