Failure to Initiate Medicine in Newly Diagnosed Hypertensives Despite Sustained High Blood Pressure in Nepal: an Under-discussed Dimension of Non-adherence

Nishant Thakur, 1 Shyam Sundar Budhathoki^{2,3}

¹Ministry of Health and Population, Nepal, ²Golden Community, Lalitpur, Nepal, ³Imperial College London, London, UK.

ABSTRACT

Hypertension is growing challenge in Nepalese community which is evident from the growing concern from all sectors. Non-adherence to hypertensive medication pose challenge as patients are reluctant to start drug despite receiving physician's advice. Continuing drug life-long once started, is a fear factor that needs dealing urgently.

Keywords: Adherence; barrier; hypertension

INTRODUCTION

Itahari is a rapidly growing sub-metropolitan city in Eastern Nepal with a population of 1,40,517.1 Better urban facilities, good health access, business, employment and education opportunities has attracted large number of people from the mountains and hills to this city in over a decade. Better urban facilities and good health access compared to their native place of stay have attracted many.

CASE 1

Krishna (name changed) is 32-year old man from Tharu community (indigenous group from terai). He moved to this town 2 years back for better education of his daughter and start a business from savings he made while working in biscuit factory. Not being able to complete education, he moved around switching jobs. With member of 3 and earning barely to make ends meet, he struggles to find his ground in the city. Krishna was diagnosed with hypertension 2 years back, in a private clinic nearby his home. His blood pressure was measured by health assistant who then advised him to see physician. He was prescribed a calcium channel blocker, however, Krishna was unhappy and reluctant to start taking the medicine. On asking, the reason for not continuing the drug, despite knowing the risks, he answered, "If I start the medicine once, I will have to take it lifelong. ... and if I stop in between I fear that there will be consequences.

Therefore, I will exercise and try to reduce it. I am not going to take it right now". Once a while he visits nearest pharmacy for monitoring blood pressure which he says is 148/98 mm hg. Krishna reports Despite this, he is not taking any medications. Krishna has a family history of hypertension from his father, who passed away few months back due to hemorrhagic stroke.

CASE 2

Gopi (name changed) is 29-year male from Brahmin community, lives in central market of the city. Completing is higher education, he helps his father run a restaurant while he waits for his visa to Qatar for job as a manual labor. He lives in family of 4 and family makes satisfactory income from their business. He smokes 4/5 cigarettes a day and drinks beer occasionally. Gopi was diagnosed with hypertensive emergency 11 months back in a private hospital. After observation for 8 hours in a hospital, he was also prescribed with calcium channel blocker with strict advice for follow up. Gopi gave up taking medicines after about a few weeks but does go for blood pressure check up on fortnightly which is still on higher side (140/94 mm hg is the lowest he has ever had). On asking, he replies, "I feel fine now, I don't have any problem and I have joined gym where I do cardio exercises. The blood pressure is not as high as before. I should not habituate my body to take anti hypertensive medicines because once that happens I have to take it lifelong." On advice from his uncle who is diabetic, he is

Correspondence: Nishant Thakur, Ministry of Health and Population, Nepal. Email: neeshant14@gmail.com, Phone: +9779818008069, +9779860035505. taking ayurvedic medicines from a local ayurvedic shop which gives him a sense of satisfaction.

UNDER-DISCUSSED DIMENSION

Above two cases are examples of what we like to discuss as failure to initiate medications despite sustained high blood pressure in adults with newly diagnosed hypertension. Both the cases represent a similar yet different issue related to non-adherence to hypertensive medication, existing in Nepalese urban society. The burden of life-long medication is strong factor for non-adherence. There is a sense of reluctance to take medicine instead opting for life style modifications and alternative therapies which too are not complied to. When advised that they will benefit with medications, they insisted that they will try and be regular with their exercises and ayurvedic medicines and avoid drugs as far as possible. In addition to that, irregularities in prices of medicines in different pharmacies may also have made Krishna and Gopi skeptic.² Change in lifestyle behaviors, dietary pattern, urbanization including improving healthcare reporting's have contributed to rise in hypertension.³ STEPs survey in 2013 revealed prevalence of hypertension in Nepal to be 25.7% including those who are not under medication. ⁴ Adherence accounts for major share of uncontrolled hypertension anywhere and it is considered a hard barrier to overcome. Furthermore, control of blood pressure after being diagnosed is additional challenge.

REMOVING FEAR AS BARRIER

Many factors affect adherence. As shown by literature,6 societal-related factors, medication regimen related factors, disease-related factors and healthcare related factors affect how patients stick to their drug regimen. Above mentioned cases plainly feature perception and belief, an important facet of patient-related factors. Their belief on existing therapy highlights ambiguity. Perceived factors like seriousness of disease, life restrictions, and long-term harm along with skeptical and fatalistic belief can be seen affecting above mentioned patients. Though behaviour modification is barrier to control of BP,7 patients like Krishna and Gopi need motivation so taking drug on regular basis becomes an usual norm rather than fearing away from it and stopping abruptly without physician's guidance.

Interaction of healthcare delivery system of Nepal is complex, which can be briefly summarized by the Kleinman's classic model of healthcare, where western medicine is affected by presence of personal belief, and use of complementary and alternative medicines.8

Variation in drug prices and its availability² delivered has raised doubts among patients like Krishna (name changed), which can be the reason for fear of having medicines lifelong. Hypertension has contributed to 9.4 million deaths every year world-wide and number of adults with hypertension in 2025 is predicted to rise by about 60%.9 Owing to the seriousness of the problem, strict attention is required to measure the burden of non-adherence. Plan of intervention is imperative from a community level to make people believe on therapy and eventually adhere to it, keeping in mind the existing and interacting healthcare delivery system.

CONCLUSIONS

Existing complexity among different interacting factors of adherence has made overcoming it very difficult. This clearly is evident from the above two cases where fear of taking anti-hypertensive drug "lifelong" is strong barrier to adherence. This perception needs to be challenged. Further research on quantifying hypertensive people who have not initiated drug therapy despite prescription and identifying potential interventions involving the communities and health workers is needed to win peoples' perception to way they start drug therapy and not stop without physician's advice.

ACKNOWLEDGEMENTS

We would like to thank Health workers of Itahari Primary Health Care Center for providing additional information and for responding to queries.

REFERENCES

- Central Bureau of Statistics. Government of Nepal [Internet]. 2018.
- Devkota A, Paudel A, Koirala B, Baral D, Gautam S, Kumar S. Price Variation and Availability of Free Medicine for Non-communicable Diseases. J Nepal Health Res Counc. 2018;16(2):118-23.[INHRC]
- Multisectoral Action Plan for the Prevention and Control of Non Communicable Diseases (2014-2020) Government of Nepal. 2020; [Full Text]
- NHRC Nepal Health Research Council. Non Communicable Diseases Risk Factors: STEPS Survey Nepal 2013. Government Nepal Minist Heal Popul Nepal Heal Res Counc [Internet]. 2013;(May):1–141.[Download PDF]
- Krousel-Wood M, Thomas S, Muntner P MD. Medication adherence: a key factor in achieving blood pressure control and good clinical outcomes in hypertensive patients. Curr Opin Cardiol. 2004;19(4):357-62.[Article]

- 6. Jaam M, Ibrahim MM, Kheir N, Awaisu A. A Proposed Holistic Conceptual Framework for Barriers to Medication Adherence in Diabetes. Value in Health. 2016 Nov 1;19(7):A676-7.[Article]
- 7. Shrestha S, Shrestha A, Koju RP, Logerfo JP, Karmacharya BM, Sotoodehnia N, et al. Barriers and facilitators to treatment among patients with newly diagnosed
- hypertension in Nepal. 2018;1–7.[Article]
- Kleinmann A. Patients and healers in context of culture. University of California Press; 1980.
- Chockalingam A, Facc MS, C NRCF, C JGFF. Worldwide epidemic of hypertension. 2006;22(7):553-5.[Article]