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Research Article

**MEASURING BLOOD PRESSURE USING NEWER
PALPATORY METHOD**¹Dr. Muhammad Hussain, ²Dr. Hilal Ahmad, ³Dr. Nazir Hassan Mehdi¹PGT General Medicine, Peshawar Medical College and Affiliated Hospitals (Mercy Teaching Hospital, Peshawar).²Medical Officer, Basic Health Unit, Tehsil Kotli Sattian, Punjab.³Medical Officer, Rural Health Centre, Behal, Punjab.**Article Received:** October 2020 **Accepted:** November 2020 **Published:** December 2020**Abstract:**

Background: Blood pressure monitoring is a part of monitoring patient vitals. End organs like heart, kidneys, brain function is severely impaired by increased or decreased blood pressure. Different methods like auscultatory, palpatory and by oscillometry could be used to measure blood pressure non-invasively. This study shows the blood pressure of patients measured by palpitation.

Materials and Methods: It is a cross-sectional study which covered 100 patients. Participants having age 18-60 were included. Their systolic and diastolic blood pressures are measured by independent observer each and compared by both methods i.e., auscultatory and palpatory. Range and percentage were used to compare the results.

Results: Out of 100 pts whose blood pressure was measured by palpatory and auscultatory method, it was found that 58% patients had BP measured by palpatory method with range of ± 2 mmHg of auscultatory method and 22% had within ± 4 mmHg and 20% patients had same readings.

Conclusions: The palpatory method of measuring blood pressure is quite accurate and a fast method too.

Keywords: Blood pressure, systolic, diastolic, auscultatory method, palpatory method.

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INTRODUCTION:

In clinical examination of a patient blood pressure is commonly measured. Hemodynamic status of a patient can be easily assessed by blood pressure reading. First mercury sphygmomanometer was used in 1881 by Von Basch to measure blood pressure. Normal adult has 120/80 mmHg BP. On an average scale, blood pressure has remained same since 1975 worldwide. Blood pressure may vary among males and females and even show diverse regional and ethnic trends. Palpatory and auscultatory methods are used in blood pressure monitoring. [1] Additionally, non-invasive BP monitoring by auscultation is a gold standard in terms of accuracy. [2] Nowadays there are automatic electronic blood pressure monitors which measure oscillation in manometers. Moreover, invasive method is not that much common.

PATIENTS & METHODS:

Those patients who attended OPD, their BP was monitored. Criteria of exclusion was age i.e. those having age above 60 and below 16 were exclude. If patient is sitting or in supine position during blood pressure examination, the readings will not be effected. However, those having spine surgery, supine position is recommended. Most of the guideline recommend sitting position. [3] [4] His arm is exposed above the elbow and tie cuff of sphygmomanometer about an inch above the elbow. To avoid any error size has to be of normal size. [5] Now palpate the radial pulse with three fingers method. The cuff is inflated 30 mmHg where you feel the pulse has disappeared. Now put three fingers on brachial artery in antecubital fossa. Start deflating the cuff. The point at which a thrill is felt (blood start flowing through the brachial artery due to turbulence) on three fingers is basically systolic pressure and the disappearance of thrill (due to laminar flow of the blood) shows diastolic blood pressure. With practice this thrill can be easily appreciated even in adults. Jules constant also used similar that palpatory method to measure blood pressure. [6]

Study and Analysis:

For this study and analysis 100 adult patients were selected without gender discrimination. Palpatory and auscultatory method were used to measure systolic and diastolic blood pressure by independent blinded observer. It was found that 58% patients had BP measured by palpatory method with range of ± 2 mmHg of auscultatory method and 22% had within ± 4 mmHg and 20% patients had same readings.

DISCUSSION:

Only systolic blood pressure is measured by Palpatory method. If newer technique is applied

diastolic blood pressure can be measured. The benefits of palpatory method is that it is less time consuming and can be measured by just sphygmomanometer only. In Investigations like running patient on treadmill it is difficult to auscultate using stethoscope. Additionally, in noisy places it would be very easy to measure blood pressure by palpatory method. One of the drawback is that it would be quite difficult to feel the thrill when patient is obese and patient is shaking or have tremors.

CONCLUSION:

Invasive technique is thought to be a gold standard technique. Now in places where frequent blood pressure monitoring is required, the new palpatory method can easily let us know about systolic and diastolic blood pressure.

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