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Assess the level of pain among chronic kidney disease patients with AV fistula undergoing hemodialysis

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Abstract
Introduction: Chronic kidney disease (CKD) is a long term condition where the kidneys do not work as well as normal. CKD does not usually cause any symptoms until it has reached an advanced stage. It is usually detected at earlier stages by blood and urine tests. This is usually happens over many years. Hemodialysis is the type of dialysis that most people are aware of it. It involves inserting a needle, which is attached by a tube to a dialysis machine, into a blood vessel. Blood is transferred from body and into the machine, which filters out waste products and excess fluids. The filtered blood is then passed back into the body. Most people require three sessions of hemodialysis in a week, with each session lasting for four hours. Pain is the one of the common unpleasant sensation experienced by patients during their time in hospital, who is undergoing hemodialysis procedure. The aim of the study is to assess the level of A.V fistula pain among Chronic Kidney Disease patients with AV fistula undergoing hemodialysis
Methodology: A cross-sectional study was conducted on 100 Participants who are admitted in dialysis unit in Narayana Medical College Hospital Who fulfilling the inclusion criteria. The tool of the study consists of Socio demographic data and pain scale- Modified MC Gill Pain Assessment Scale. It consists of 20 items (Subjective Data) Visual Analogue Scale (Standard scale-Objective data).
Results: The result shows that Modified MC Gill Pain Assessment score was 40 (40%) of them having Distressing level of pain score, 31 (21%) of them having horrible level of pain score and 29 (18%) of them are having excruciating level of pain Score and VAS pain scale shows that 43 (55%) were having moderate pain level, 27 (25%) were having severe level of pain 30 (28%) were having worst level of pain.
Conclusion: Most of the CKD patients are having distressing level of pain with A.V fistula. However, need to conduct like interventional studies to reduce the AV Fistula pain. A study can be conducted to assess the attitude and practice among nurses posted in hemodialysis unit.

Keywords: Pain, chronic kidney disease, AV fistula, hemodialysis

Introduction

Chronic kidney disease (CKD) is a long term condition where the kidneys do not work as well as normal. CKD does not usually cause any symptoms until it has reached an advanced stage. It is usually detected at earlier stages by blood and urine tests. This is usually happen so many years. There are five stages of CKD - the final stage is kidney failure, when the kidneys can no longer support the body. However, some people with CKD do not go through all stages.

Dialysis is a type of treatment that replicates many of the functions of the kidneys. It is used to treat cases of kidney failure, where the kidneys have been severely damaged and lost almost all of their ability to function. Hemodialysis is the type of dialysis involves inserting a needle, which is attached by a tube to a dialysis machine, into a blood vessel. Blood is transferred from body and into the machine, which filters out waste products and excess fluids. The filtered blood is then passed back into the body. Most people require three sessions of hemodialysis in a week, with each session lasting for four hours.

Pain is the one of the common unpleasant sensation experienced by patients during their time in hospital, who is undergoing hemodialysis procedure. The International Association for the Study of Pain (IASP) defines pain as "an unpleasant, subjective sensory and emotional experience associated with actual or potential tissue damage."

Pain management is considered as "the fifth vital sign and is common in patients with

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advanced CKD. Over 58% of patients experience pain and approximately 49% of patients report moderate or severe pain, whether patients are treated with dialysis or managed conservatively. It is widely recognized that pain, in particular chronic pain, is associated with psychological distress, depressive disorders, limitations in work, family, and social life; decreased life satisfaction and quality of life (QOL) and increased hospitalizations and emergency department visits.

Veronius da Rosa Marques *et al.* (2016) conducted a quantitative study on Pain intensity assessment in chronic renal patients among 88 hemodialysis patients. The sampling technique used for this study is Non probability purposive sampling technique. Data were collected by using interview method through Mc Gill pain scale. The results showed that 75% had no pain, followed by mild pain (17%), moderate (4%) and severe (3.4%) pain. At the end of the session, 58% remained without pain, however approximate percentages of mild or moderate pain (20.5% and 19.3%) and severe pain (2.3%) have shown increased pain intensity during the course of hemodialysis. The study concluded that qualify multi professional team actions toward attention to chronic renal patients and extensive to their families.

Methodology
The Research approach was adopted for this study is Quantitative approach. A cross sectional descriptive research design was used. Non probability simple random sampling technique was used for the study. The study was conducted among 100 Hemodialysis patients at Narayana Medical College Hospital, Nellore. The setting was chosen based on of investigation's feasibility in terms of availability of required sample. The tool of the study consists of Socio demographic data and pain scale-Modified MC Gill Pain Assessment Scale. It consists of 20 items (Subjective Data) Visual Analogue Scale (Standard scale-Objective data).Ethical clearance was obtained by ethics committee from Narayana Medical College and hospital, Nellore. The study was sought from the human ethical committee at Narayana Medical College hospital. The entire protocol was explained to each participant regarding purpose and nature, benefit of the study and also assure their to withdraw from the study at any point of time. The information sheet and consent form given to each participant.

The study was conducted for a period of 4 weeks. Total 100 Patients were taken who are undergoing hemodialysis and fulfilled the inclusion criteria were selected by using Simple Random Sampling technique. Demographic variables and level of pain was assessed by MC Gill pain and VAS Pain scale. The data analysis was planned as frequency and percentage distribution of socio demographic variables. Mean and standard Deviation based on pain level among CKD patients with AV fistula undergoing hemodialysis.

Results
The result shows that Modified MC Gill Pain Assessment score was 40 (40%) of them having Distressing level of pain score, 31 (31%) of them having horrible level of pain score and 29 (29%) of them are having excruciating level of pain Score and VAS pain scale shows that 43 (43%) were having moderate paiṇ level, 27 (27%) were having severe level of pain 30 (30%) were having worst level of pain. MC GILL pain scale level of A.V fistula pain among patient with

hemodialysis mean score is 14.58 with SD 1.31 and VAS pain scale level of A.V fistula pain among patient with hemodialysis mean score is 1.54 with SD 0.24.
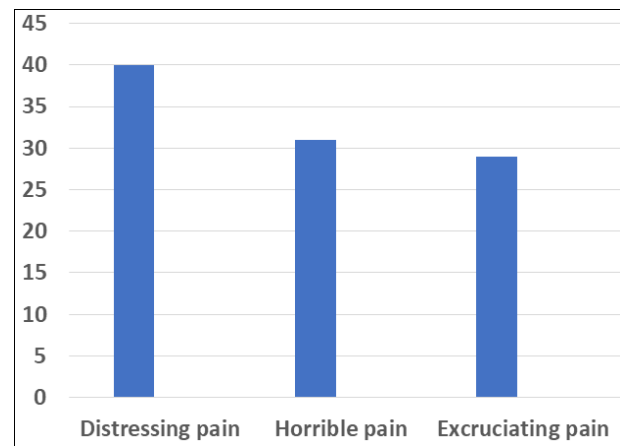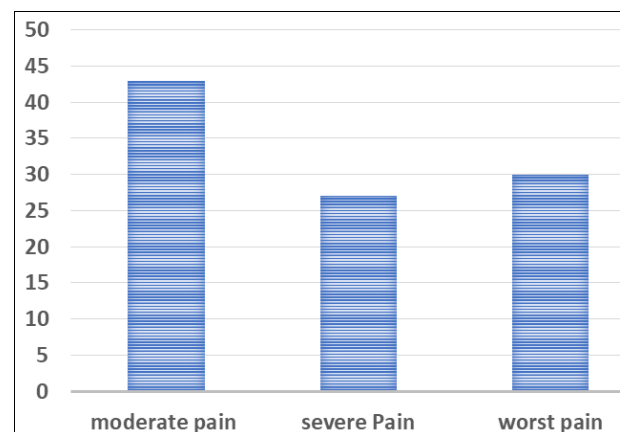

Fig 1: MC gill pain scale

Fig 2: Vas scale

Discussion
The data was analyzed and the findings were discussed based on the objectives of the study.

1. Assess the level of A.V fistula pain among Chronic Kidney Disease Patients with A.V fistula undergoing hemodialysis. The result shows that Modified MC Gill Pain Assessment score was 40 (40%) of them having Distressing level of pain score, 31 (21%) of them having horrible level of pain score and 29 (18%) of them are having excruciating level of pain Score and VAS pain scale shows that 43 (43%) were having moderate pain level, 27 (27%) were having severe level of pain 30 (30%) were having worst level of pain.

2. The association between AV Fistula pain score and demographic variables are showing non-significant. Statistical significance was confirmed using chi square test. The main conclusion drawn from the study was 40 (40%) of them having Distressing level of pain score,assessed by Mc Gill pain scale and 43 patients felt moderate pain assessed by VAS scale among Chronic Kidney Disease patients with AV fistula undergoing hemodialysis.

Implications
However, fatigue among dialysis patients is often unrecognized, neglected and untreated since symptoms are usually subjective, sometimes not verbalized by patients and

not clearly identifiable. In view of this, these type of studies was to explore the pain during AV fistula puncture those who are undergoing haemodialysis among CKD patients and address their needs by nurses.

Conflict of Interest
Not available

Financial Support
Not available

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