

Scheduled Outpatient Intravenous Infusion per Headache Protocol and Effect on Migraine-related Quality of Life in Patients with Chronic Daily Headaches

Asra Akbar^{1,2*}

¹Department of Headache Medicine, Baylor University Medical Center, Baylor Scott & White Healthcare, Dallas, TX, USA

²Department of Pediatric Neurology, University of Illinois College of Medicine, Peoria, IL, USA

*Corresponding author: Asra Akbar, Department of Pediatric Neurology, University of Illinois College of Medicine, 420 NE Glen Oak Avenue, Suite 401, Peoria, IL-61603, USA, Tel: 314-753-0079; E-mail: dr_aakbar@yahoo.com

Received date: February 21, 2017; Accepted date: July 24, 2017; Published date: July 28, 2017

Copyright: © 2017 Akbar A. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

Chronic Daily Headache (CDH) and Medication overuse headaches (MOH) are important public health problems. CDH is defined as a headache occurring on 15 days or more per month over three month duration with a worldwide prevalence of 4%. MOH is a daily or near daily headache over 15 days a month that results from overuse of migraine abortive medications and is one of the most common chronic headache disorders (worldwide prevalence of 1-2%).

A total of 56 patients were enrolled in the study. 51 patients completed a one month follow-up and 39 patients completed a two month follow-up. After informed consent, migraine specific quality of life questionnaire (MSQ 2.1) and patient rating of migraine specific measures were administered on the first day of treatment and at 5 and 10 weeks following completion of treatment. The protocol included IV DHE, IV magnesium, IV Decadron, IV Depacon based on standard factors identified by the headache specialist and as needed Toradol, Benadryl and anti-nausea medications headache frequency and severity was decreased. Migraine associated photophobia and phonophobia improved markedly ($p < 0.0001$) and number of people needing abortive medication more than 10 days a month was reduced by 40%.

The data provide evidence for the efficacy of scheduled outpatient intravenous therapy per the headache center protocol for CDH and suggests that patients experience diminished frequency and intensity of headaches with improved quality of life one month and two months post therapy. Outpatient settings and timings provided a more comfortable and time effective setting to patients and families with decrease visits to the emergency room with a will prove to be a more cost effective method of treatment.

Keywords: Chronic daily headaches; Medication overuse headache; Intravenous infusions; outpatient treatment; Migraine-related quality of life

Abbreviations: ICHD-3 beta: International Classification of Headache Disorders-beta; CDH: Chronic Daily Headache; MOH: Medication Overuse Headache; TM: Transformed Migraine; NDPH: New Daily Persistent Headache; HC: Hemicrania Continua; IV DHE: Intravenous Dihydroergotamine

Background

CDH can be a serious health issues that can affect the quality of life across patient age. The chronicification of migraine although not fully understood is thought to be related to central sensitization along with "neurogenic inflammation" [1-4]. CDH includes transformed migraine (TM), chronic tension-type headache new daily persistent headache (NDPH) and hemicrania continua (HC) and medication overuse headache (MOH). In 1986 Raskin published about the use of DHE for intractable migraines. 49 of the 55 DHE treated patients became headache free within 48 hours and 39 of them sustained benefits in a Mean follow-up of 16 months [5]. Silberstein in 1990 concluded that a regimen of repetitive intravenous DHE can provide rapid relief of chronic intractable headache and medication overuse headaches [6].

Silberstein revised the DHE study in 1992 showing 50 patients treated with IV DHE [7].

At 3 months follow-up 44% had an excellent or good result. At 24 months, 39 patients were analyzed 59% had a good or excellent result. Charles JA and Von DP in 2010 showed patients reported an average of 63.4% reduction in the intensity of migraine pain by the end of the 3 day infusion with IV DHE [8]. Long-term follow-up data from 3 months to 4 years indicated an average 88% reduction in headache frequency. The study showed that use of outpatient continuous IV DHE is an effective therapy. Freitag in 2001 used a retrospective chart review of 642 current patients under treatment with divalproex sodium for CDH [9].

The Mean improvement was 47% with an improvement in migraine of about 65%. A study by Stillman in 2004 study response of CDH with IV Depakote and showed that one hundred thirty treatments were given to 89 women and 17 men aged 17 to 76 years; for first treatments only 61 patients (57.5%) responded to treatment whereas for all treatments 82 patients (63.1%) responded [10].

Saper and Silberstein in 2006 documented efficacy of IV DHE for management of CDH [11]. 214 patients with chronic daily headache treated with repetitive intravenous DHE Silberstein reported that 92% of these patients became headache free usually within 48 hours with

continued improvement over 2 years. However, fewer studies have been carried out on an outpatient basis looking at the long term effects and efficacy of the treatments. Thus the Long term effects of scheduled outpatient IV infusions are limited.

Methods

Patients diagnosed with chronic daily headache by provider's board certified in headache medicine were referred for IV treatment as part of standard medical practice. Treatment was provided in a tertiary care outpatient headache center which is an outpatient department. Participants were recruited for the study using standard Informed Consent as part of an IRB approved protocol. The Inclusion Criteria

Measure	Pre (n=56)	Treatment	4-6 Weeks Post (n=51)	Pre vs. 4-6 Month Post P Value	8-10 Weeks Post (n=39)	Pre vs. 8-10 Month Post P Value
Headache frequency (0-31)	24.3 (7.6)		14.2 (7.0)	<0.001	17.6 (6.2)	<0.001
Headache Intensity (0-10)	6.8 (1.8)		4.0 (4.4)	<0.001	3.5 (1.2)	<0.001
Photophobia Frequency (1-10)	6.8 (3.4)		3.3 (1.1)	<0.001	3.4 (0.8)	<0.001
Photophobia Intensity (1-10)	6.8 (3.4)		3.3 (1.1)	<0.001	3.2 (0.8)	<0.001
Phonophobia frequency (1-10)	6.9 (3.3)		3.1 (1.0)	<0.001	3.2 (0.7)	<0.001
Phonophobia Intensity (1-10)	6.8 (3.3)		2.9 (0.9)	<0.001	3.2 (0.7)	<0.001
MSQ-RR	34.6 (21.6)		60.2 (18.0)	<0.001	62.3 (9.6)	<0.001
MSQ-RP	46.0 (22.8)		63.0 (19.2)	<0.001	60.6 (11.6)	<0.001
MSQ-EF	38.0 (23.3)		58.8 (21.2)	<0.001	66.2 (10.2)	<0.001
MSQ-TOT	38.8 (20.0)		59.3 (19.6)	<0.001	64.7 (10.6)	<0.001
Using Meds>10 Days Month	75%		30%		35%	

- 6 Silberstein SD, Schulman EA, Hopkins MM (1990) Repetitive intravenous DHE in the treatment of refractory headache. *Headache* 30: 334-339
- 7 Silberstein